

Tapered Roller Bearings

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● Interchangeability

Bearings designated as E J (E prefix and J suffix) comply with ISO standards in sub-unit dimensions. The cups and cones of these bearings are internationally interchangeable.

α : Contact angle
C : Cup width
E : Cup smallest internal diameter

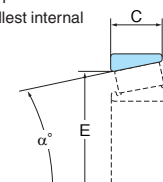


Fig 1. Sub-unit dimensions

● Combination and Double-row Tapered Roller Bearings

When radial loads act on a Tapered roller bearing, an axial load is generated from the reaction of the internal contact angle of the bearing. This induced axial load creates a separating force on the cup and cone which is normally offset by mounting Tapered roller bearings in pairs or as multi-row sets.

Table 1 shows combination and double-row mounting of Tapered roller bearings.

● Inch Series

NACHI manufactures inch-dimensioned series Tapered Roller Bearings to ABMA (ANSI) standards.

Table 1. Double-row Tapered Roller Bearing Configurations and Features

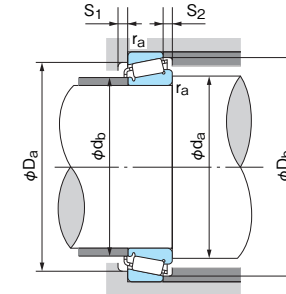
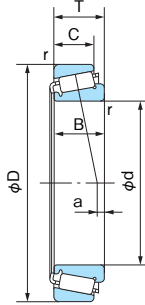
Series or Configuration	Cross section	Example Bearing Number	Adjustment
Back-to-back (DB mounting)		E32208JDB10	Combination of two standard single-row Tapered roller bearings. Two mounting systems are used; one using preset spacers, and the other requiring adjustment using either torque or end-play control.
Face-to-face (DF mounting)		E32208JDF	
KBE KDE		150KBE030	Either double inner or outer ring. Adjustment is normally done using spacers. If spacers are not used, please contact NACHI for end-play specifications.
KBD		150KBD030	



Tapered Roller Bearings

Metric Series

Bore Diameter: 15~35mm



Dynamic equivalent radial load

$P_r = X F_r + Y F_a$

$\frac{F_a}{F_r} \leq e$		$\frac{F_a}{F_r} > e$	
X	Y	X	Y
1	0	0.4	Y ₁

Values e and Y₁ from table.

Static equivalent radial load

Larger value of following to be used:

$P_{or} = 0.5 F_r + Y_0 F_a$

$P_{or} = F_r$

Values Y₀ from table.

1N=0.102kgf

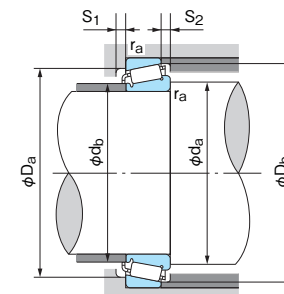
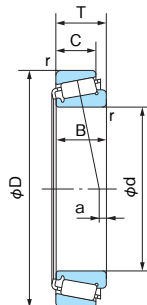
Boundary dimensions (mm)							Bearing No.	(Ref.) ISO355 Dimension series	Basic dynamic load rating Cr (N)	Basic static load rating Cor (N)	Limiting speed (min ⁻¹)		Abutment and fillet dimensions (mm)								Load center (mm) a (1)	Constant e	Axial load factor		Mass(kg) Reference	Bearing No.
d	D	T	B	C	Cone r (min)	Cup r (min)					Grease lubrication	Oil lubrication	d _a (min)	d _b (max)	D _a (min)	D _b (min)	S ₁ (min)	S ₂ (min)	Cone r _a (max)	Cup r _a (max)			Y ₁	Y ₀		
15	35	11.75	11	10	0.6	0.6	H-E30202	—	15800	14500	12000	16000	19.5	20	29	33	2	1.7	0.6	0.6	3.4	0.32	1.88	1.04	0.054	H-E30202
	42	14.25	13	11	1	1	H-E30302J	2FB	21900	19200	10000	14000	20.5	22	36.5	38	2	3	1	1	4.3	0.29	2.11	1.16	0.098	H-E30302J
17	40	13.25	12	11	1	1	H-E30203J	2DB	20800	20700	10000	14000	22.5	23	33	37	2	2	1	1	3.2	0.35	1.74	0.96	0.081	H-E30203J
	47	15.25	14	12	1	1	H-E30303J	2FB	27400	24500	9200	12000	22.5	25	40	42	2	3	1	1	4.3	0.29	2.11	1.16	0.133	H-E30303J
	47	20.25	19	16	1	1	H-32303	—	31900	29900	9400	13000	22.5	25	39	43	2	4	1	1	7.9	0.29	1.97	1.08	0.176	H-32303
20	42	15	15	12	0.6	0.6	H-E32004J	3CC	27300	31500	9300	13000	24.5	25	35	39	3	3	0.6	0.6	4.5	0.37	1.60	0.88	0.102	H-E32004J
	47	15.25	14	12	1	1	H-E30204J	2DB	27000	27200	8700	12000	25.5	27	39	44	2	3	1	1	3.5	0.35	1.74	0.95	0.127	H-E30204J
	47	19.25	18	15	1	1	H-E32204	—	32500	34800	8700	12000	25.5	27	39	43	2	4	1	1	6.2	0.35	1.73	0.95	0.156	H-E32204
	52	16.25	16	13	1.5	1.5	H-E30304J	—	36400	35200	8300	11000	28.5	28	44	47	2	3	1.5	1.5	3.0	0.30	2.00	1.10	0.179	H-E30304J
	52	22.25	21	18	1.5	1.5	H-E32304J	2FD	45100	46700	8400	11000	28.5	27	43	47	3	4	1.5	1.5	7.8	0.30	2.00	1.10	0.239	H-E32304J
25	47	15	15	11.5	0.6	0.6	H-E32005J	4CC	30200	37700	8300	11000	29.5	30	40	44	3	3.5	0.6	0.6	3.2	0.43	1.39	0.77	0.118	H-E32005J
	47	17	17	14	0.6	0.6	H-E33005J	2CE	33500	42300	8300	11000	29.5	30	41	44	3	3	0.6	0.6	6.1	0.29	2.07	1.14	0.131	H-E33005J
	52	16.25	15	13	1	1	H-E30205J	3CC	31500	33700	7500	10000	30.5	31	44	48	2	3	1	1	3.3	0.37	1.60	0.88	0.156	H-E30205J
	52	19.25	18	16	1	1	H-E32205J	2CD	39800	44800	7900	11000	30.5	31	43	48	2	4	1	1	5.7	0.36	1.67	0.92	0.188	H-E32205J
	52	22	22	18	1	1	H-E33205J	2DE	48900	58500	7900	10000	30.5	30	43	49	4	4	1	1	7.9	0.35	1.71	0.94	0.225	H-E33205J
	62	18.25	17	15	1.5	1.5	H-E30305J	2FB	48200	46900	6800	9000	33.5	34	54	57	2	3	1.5	1.5	5.4	0.30	2.00	1.10	0.273	H-E30305J
	62	18.25	17	13	1.5	1.5	H-E30305DJ	7FB	39800	42500	5700	8000	33.5	34	47	58.5	3	5	1.5	1.5	-2.2	0.83	0.73	0.40	0.269	H-E30305DJ
	62	25.25	24	20	1.5	1.5	H-E32305J	2FD	61200	64100	6900	9100	33.5	33	52	57	3	5	1.5	1.5	8.6	0.30	2.00	1.10	0.386	H-E32305J
30	55	17	17	13	1	1	H-E32006J	4CC	38200	48000	7000	9400	35.5	35	47	52	3	4	1	1	3.4	0.43	1.39	0.77	0.177	H-E32006J
	55	20	20	16	1	1	H-E33006J	2CE	43200	55200	7000	9400	35.5	36	48	52	3	4	1	1	7.0	0.29	2.06	1.13	0.203	H-E33006J
	62	17.25	16	14	1	1	H-E30206J	3DB	41500	44800	6500	8700	35.5	37	53	57	2	3	1	1	3.1	0.37	1.60	0.88	0.236	H-E30206J
	62	21.25	20	17	1	1	H-E32206J	3DC	50700	57900	6500	8700	35.5	37	52	58	2	4	1	1	5.3	0.37	1.60	0.88	0.292	H-E32206J
	62	25	25	19.5	1	1	H-E33206J	2DE	66400	79400	6500	8700	35.5	36	53	58	2	5.5	1	1	8.7	0.34	1.76	0.97	0.359	H-E33206J
	72	20.75	19	16	1.5	1.5	H-E30306J	2FB	59600	60100	5800	7700	38.5	40	62	66	3	4.5	1.5	1.5	5.1	0.31	1.90	1.05	0.411	H-E30306J
	72	20.75	19	14	1.5	1.5	H-E30306DJ	7FB	50900	54900	4900	6800	38.5	40	55	68	3	6.5	1.5	1.5	-2.9	0.83	0.73	0.04	0.400	H-E30306DJ
	72	28.75	27	23	1.5	1.5	H-E32306J	2FD	82200	91600	5900	7900	38.5	39	59	66	3	5.5	1.5	1.5	9.8	0.31	1.90	1.05	0.588	H-E32306J
35	55	14	14	11.5	0.6	0.6	E32907J	2BD	26100	36500	6600	8800	39.5	40	49	52	2.5	2.5	0.6	0.6	3.1	0.29	2.06	1.13	0.120	E32907J
	62	18	18	14	1	1	H-E32007J	4CC	45500	59400	6200	8200	40.5	40	54	59	4	4	1	1	2.9	0.45	1.32	0.73	0.231	H-E32007J
	62	21	21	17	1	1	H-E33007J	2CE	51300	68000	6200	8200	40.5	41	55	59	3	4	1	1	6.8	0.31	1.97	1.08	0.263	H-E33007J
	72	18.25	17	15	1.5	1.5	H-E30207J	3DB	55100	60900	5600	7400	43.5	44	62	67	3	3	1.5	1.5	2.9	0.37	1.60	0.88	0.344	H-E30207J
	72	24.25	23	19	1.5	1.5	H-E32207J	3DC	69600	82400	5600	7500	43.5	43	61	67	3	5	1.5	1.5	6.0	0.37	1.60	0.88	0.453	H-E32207J
	72	28	28	22	1.5	1.5	H-E33207J	2DE	86700	107000	5700	7500	43.5	42	61	68	5	6	1.5	1.5	9.6	0.35	1.70	0.93	0.551	H-E33207J
	80	22.75	21	18	2	1.5	H-E30307J	2FB	76200	78900	5200	6900	45	45	70	74	3	4.5	2	1.5	5.8	0.31	1.90	1.05	0.527	H-E30307J
	80	22.75	21	15	2	1.5	H-E30307DJ	7FB	63100	69100	4300	6000	45	44	66	76.5	3	7.5	2	1.5	-4.1	0.83	0.73	0.40	0.536	H-E30307DJ
	80	32.75	31	25	2	1.5	H-E32307J	2FE	101000	114000	5300	7000	45	44	66	74	3	7.5	2	1.5	12.2	0.31	1.90	1.05	0.776	H-E32307J

Note: (1) Minus value of load center "a" indicates that the center is located outside of cone backface.

Tapered Roller Bearings

Metric Series

Bore Diameter: 40~50mm



■ Dynamic equivalent radial load
 $P_r = X F_r + Y F_a$

$\frac{F_a}{F_r} \leq e$		$\frac{F_a}{F_r} > e$	
X	Y	X	Y
1	0	0.4	Y ₁

Values e and Y₁ from table.

■ Static equivalent radial load
 Larger value of following to be used:
 $P_{0r} = 0.5 F_r + Y_0 F_a$
 $P_{0r} = F_r$
 Values Y₀ from table.

1N=0.102kgf

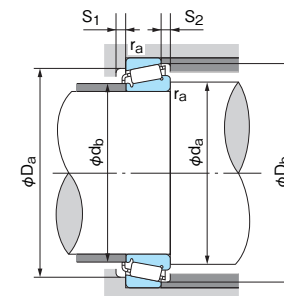
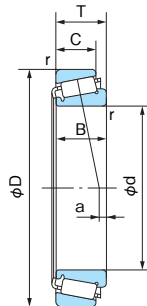
Boundary dimensions (mm)							Bearing No.	(Ref.) ISO355 Dimension series	Basic dynamic load rating Cr (N)	Basic static load rating Cor (N)	Limiting speed (min ⁻¹)		Abutment and fillet dimensions (mm)								Load center (mm) a (1)	Constant e	Axial load factor		Mass(kg) Reference	Bearing No.
d	D	T	B	C	Cone r (min)	Cup r (min)					Grease lubrication	Oil lubrication	da (min)	db (max)	Da (min)	Db (min)	S1 (min)	S2 (min)	Cone ra (max)	Cup ra (max)			Y1	Y0		
40	62	15	15	12	0.6	0.6	H-E32908J	2BC	33500	48500	5900	7800	44.5	45	55	59	3	3	0.6	0.6	3.1	0.29	2.07	1.14	0.164	H-E32908J
	68	19	19	14.5	1	1	H-E32008J	3CD	53500	71400	5600	7400	45.5	46	60	65	4	4.5	1	1	3.9	0.38	1.58	0.87	0.282	H-E32008J
	68	22	22	18	1	1	H-E33008J	2BE	60400	84600	5500	7400	45.5	46	60	65	3	4	1	1	7.3	0.28	2.12	1.17	0.326	H-E33008J
	75	26	26	20.5	1.5	1.5	H-E33108J	2CE	82200	108000	5200	6900	48.5	47	65	71	4	5.5	1.5	1.5	7.7	0.36	1.69	0.93	0.508	H-E33108J
	80	19.75	18	16	1.5	1.5	H-E30208J	3DB	62900	69200	5000	6700	48.5	49	69	75	3	3.5	1.5	1.5	2.7	0.37	1.60	0.88	0.434	H-E30208J
	80	24.75	23	19	1.5	1.5	H-E32208J	3DC	77700	90800	5000	6600	48.5	48	68	75	3	5.5	1.5	1.5	5.3	0.37	1.60	0.88	0.554	H-E32208J
	80	32	32	25	1.5	1.5	H-E33208J	2DE	108000	139000	5000	6700	48.5	47	67	76	5	7	1.5	1.5	11.3	0.36	1.68	0.92	0.758	H-E33208J
	90	25.25	23	20	2	1.5	H-E30308J	2FB	90600	101000	4500	6100	50	52	77	82	3	5	2	1.5	5.4	0.35	1.74	0.96	0.757	H-E30308J
	90	25.25	23	17	2	1.5	H-E30308DJ	7FB	80500	90200	3800	5300	50	51	71	86	3	8	2	1.5	-4.6	0.83	0.73	0.40	0.757	H-E30308DJ
45	90	35.25	33	27	2	1.5	H-E32308J	2FD	116000	139000	4600	6200	50	50	73	82	3	8	2	1.5	10.9	0.35	1.74	0.96	1.06	H-E32308J
	68	15	15	12	0.6	0.6	H-E32909J	2BC	34700	52400	5300	7100	49.5	50	61	64	3	3	0.6	0.6	2.5	0.32	1.88	1.04	0.190	H-E32909J
	75	20	20	15.5	1	1	H-E32009J	3CC	62800	86500	5000	6600	50.5	51	67	72	4	4.5	1	1	3.5	0.39	1.53	0.84	0.354	H-E32009J
	75	24	24	19	1	1	H-E33009J	2CE	69600	101000	5000	6700	50.5	51	67	71	4	5	1	1	7.6	0.29	2.04	1.12	0.416	H-E33009J
	80	26	26	20.5	1.5	1.5	E33109J	3CE	87500	120000	4800	6400	53.5	52	69	76.5	4	5.5	1.5	1.5	6.6	0.38	1.57	0.86	0.563	E33109J
	85	20.75	19	16	1.5	1.5	H-E30209J	3DB	67200	77400	4600	6100	53.5	54	74	80	3	4.5	1.5	1.5	1.8	0.40	1.48	0.81	0.502	H-E30209J
	85	24.75	23	19	1.5	1.5	H-E32209J	3DC	78300	94100	4600	6100	53.5	53	73	81	3	5.5	1.5	1.5	3.8	0.40	1.48	0.81	0.587	H-E32209J
	85	32	32	25	1.5	1.5	E33209J	3DE	112000	149000	4600	6200	53.5	52	76.5	81	5	7	1.5	1.5	10.2	0.39	1.56	0.86	0.803	E33209J
	100	27.25	25	22	2	1.5	E30309J	2FB	113000	128000	4100	5400	55	59	86	93	3	5	2	1.5	5.9	0.35	1.74	0.96	1.01	E30309J
50	100	27.25	25	18	2	1.5	E30309DJ	7FB	95100	107000	3400	4700	55	56	79	96	3	9	2	1.5	-5.7	0.83	0.73	0.40	0.973	E30309DJ
	100	38.25	36	30	2	1.5	E32309J	2FD	146000	180000	4100	5500	55	56	82	93	3	8	2	1.5	11.4	0.35	1.74	0.96	1.43	E32309J
	72	15	15	12	0.6	0.6	E32910J	2BC	35900	56300	4900	6600	54.5	55	65	69	3	3	0.6	0.6	1.3	0.34	1.76	0.97	0.195	E32910J
	80	20	20	15.5	1	1	H-E32010J	3CC	65700	94500	4600	6100	55.5	56	72	77	4	4.5	1	1	2.3	0.42	1.42	0.78	0.389	H-E32010J
	80	24	24	19	1	1	E33010J	2CE	73000	110000	4600	6100	55.5	56	72	76	4	5	1	1	6.6	0.32	1.90	1.04	0.451	E33010J
	85	26	26	20	1.5	1.5	E33110J	3CE	89400	127000	4400	5900	58.5	56	74	81.5	4	6	1.5	1.5	5.4	0.41	1.46	0.80	0.594	E33110J
	90	21.75	20	17	1.5	1.5	H-E30210J	3DB	76500	91700	4300	5700	58.5	58	79	85	3	4.5	1.5	1.5	1.65	0.42	1.43	0.79	0.566	H-E30210J
	90	24.75	23	19	1.5	1.5	H-E32210J	3DC	85000	105000	4300	5700	58.5	58	78	85	3	5.5	1.5	1.5	4.1	0.42	1.43	0.79	0.643	H-E32210J
	90	32	32	24.5	1.5	1.5	H-E33210J	3DE	119000	167000	4300	5700	58.5	57	77	86.5	5	7.5	1.5	1.5	8.9	0.41	1.45	0.80	0.887	H-E33210J
50	110	29.25	27	23	2.5	2	E30310J	2FB	137000	152000	3700	4900	62	65	95	102	3	6	2	2	6.4	0.35	1.74	0.96	1.32	E30310J
	110	29.25	27	19	2.5	2	E30310DJ	7FB	115000	133000	3100	4300	62	62	87	105	3	10	2	2	-5.8	0.83	0.73	0.40	1.25	E30310DJ
	110	42.25	40	33	2.5	2	E32310J	2FD	176000	220000	3700	5000	62	62	90	102	3	9	2	2	12.9	0.35	1.74	0.96	1.89	E32310J

Note: (1) Minus value of load center "a" indicates that the center is located outside of cone backface.

Tapered Roller Bearings

Metric Series

Bore Diameter: 55~65mm



■ Dynamic equivalent radial load
 $P_r = X F_r + Y F_a$

$\frac{F_a}{F_r} \leq e$		$\frac{F_a}{F_r} > e$	
X	Y	X	Y
1	0	0.4	Y_1

Values e and Y_1 from table.

■ Static equivalent radial load
 Larger value of following to be used:
 $P_{0r} = 0.5 F_r + Y_0 F_a$
 $P_{0r} = F_r$
 Values Y_0 from table.

1N=0.102kgf

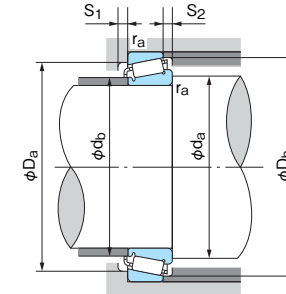
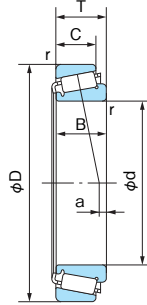
Boundary dimensions (mm)							Bearing No.	(Ref.) ISO355 Dimension series	Basic dynamic load rating Cr (N)	Basic static load rating Cor (N)	Limiting speed (min ⁻¹)		Abutment and fillet dimensions (mm)								Load center (mm) a (1)	Constant e	Axial load factor		Mass(kg) Reference	Bearing No.
d	D	T	B	C	Cone r (min)	Cup r (min)					Grease lubrication	Oil lubrication	da (min)	db (max)	Da (min)	Db (min)	S1 (min)	S2 (min)	Cone ra (max)	Cup ra (max)			Y1	Y0		
55	80	17	17	14	1	1	E32911J	2BC	44600	73300	4400	5900	61	61	72	76	3	3	1	1	2.5	0.31	1.94	1.07	0.285	E32911J
	90	23	23	17.5	1.5	1.5	H-E32011J	3CC	84600	121000	4100	5500	63.5	63	81	86	4	5.5	1.5	1.5	3.2	0.41	1.48	0.81	0.569	H-E32011J
	90	27	27	21	1.5	1.5	E33011J	2CE	96500	149000	4100	5400	63.5	63	81	86	5	6	1.5	1.5	7.3	0.31	1.92	1.06	0.672	E33011J
	95	30	30	23	1.5	1.5	E33111J	3CE	116000	161000	4000	5300	63.5	62	83	91	5	7	1.5	1.5	7.5	0.37	1.60	0.88	0.868	E33111J
	100	22.75	21	18	2	1.5	E30211J	3DB	94600	113000	3900	5200	65	64	88	94	4	4.5	2	1.5	2.0	0.40	1.48	0.81	0.732	E30211J
	100	26.75	25	21	2	1.5	E32211J	3DC	107000	133000	3900	5200	65	63	87	95	4	5.5	2	1.5	3.7	0.40	1.48	0.81	0.863	E32211J
	100	35	35	27	2	1.5	E33211J	3DE	142000	189000	3900	5200	65	62	85	96	6	8	2	1.5	9.7	0.40	1.50	0.83	1.18	E33211J
	120	31.5	29	25	2.5	2	E30311J	2FB	149000	170000	3300	4500	67	71	104	111	4	6.5	2	2	6.0	0.35	1.74	0.96	1.65	E30311J
	120	31.5	29	21	2.5	2	E30311DJ	7FB	129000	148000	2900	4000	67	68	94	113	4	10.5	2	2	-6.9	0.83	0.73	0.40	1.59	E30311DJ
60	120	45.5	43	35	2.5	2	E32311J	2FD	200000	250000	3400	4500	67	68	99	111	4	10.5	2	2	13.1	0.35	1.74	0.96	2.38	E32311J
	85	17	17	14	1	1	E32912J	2BC	46200	78200	4100	5500	65.5	66	77	81	3	3	1	1	1.4	0.33	1.81	1.00	0.306	E32912J
	95	23	23	17.5	1.5	1.5	E32012J	4CC	86100	127000	3900	5200	68.5	67	85	91	4	5.5	1.5	1.5	2.0	0.43	1.39	0.77	0.621	E32012J
	95	27	27	21	1.5	1.5	E33012J	2CE	101000	162000	3900	5200	68.5	67	85	90	5	6	1.5	1.5	6.9	0.33	1.83	1.01	0.719	E33012J
	100	30	30	23	1.5	1.5	E33112J	3CE	118000	170000	3600	4900	68.5	67	88	96	5	7	1.5	1.5	6.3	0.40	1.51	0.83	0.923	E33112J
	110	23.75	22	19	2	1.5	E30212J	3EB	106000	127000	3500	4700	70	70	96	103	4	4.5	2	1.5	1.8	0.40	1.48	0.81	0.945	E30212J
	110	29.75	28	24	2	1.5	E32212J	3EC	132000	167000	3500	4700	70	69	95	104	4	5.5	2	1.5	4.6	0.40	1.48	0.81	1.19	E32212J
	110	38	38	29	2	1.5	E33212J	3EE	174000	239000	3600	4700	70	69	93	105	6	9	2	1.5	10.8	0.40	1.48	0.82	1.57	E33212J
	130	33.5	31	26	3	2.5	E30312J	2FB	173000	201000	3100	4100	74	77	112	120	4	7.5	2.5	2	6.6	0.35	1.74	0.96	2.08	E30312J
65	130	33.5	31	22	3	2.5	E30312DJ	7FB	153000	179000	2600	3700	74	73	103	124	4	11.5	2.5	2	-7.3	0.83	0.73	0.40	2.01	E30312DJ
	130	48.5	46	37	3	2.5	32312J	2FD	221000	275000	3100	4200	74	74	107	120	4	11.5	2.5	2	16.2	0.35	1.74	0.96	2.92	32312J
	90	17	17	14	1	1	E32913J	2BC	47400	83100	3900	5200	70.5	70	81	86	3	3	1	1	0.2	0.35	1.70	0.93	0.327	E32913J
	100	23	23	17.5	1.5	1.5	E32013J	4CC	90000	137000	3600	4800	73.5	72	90	97	4	5.5	1.5	1.5	0.5	0.46	1.31	0.72	0.664	E32013J
	100	27	27	21	1.5	1.5	E33013J	2CE	103000	169000	3600	4800	73.5	72	89	96	5	6	1.5	1.5	5.9	0.35	1.72	0.95	0.762	E33013J
	110	34	34	26.5	1.5	1.5	E33113J	3DE	152000	223000	3400	4600	73.5	73	96	106	6	7.5	1.5	1.5	8.1	0.39	1.55	0.85	1.33	E33113J
	120	24.75	23	20	2	1.5	E30213J	3EB	128000	156000	3200	4300	75	77	106	113	4	4.5	2	1.5	0.6	0.40	1.48	0.81	1.18	E30213J
	120	32.75	31	27	2	1.5	E32213J	3EC	157000	203000	3200	4300	75	76	104	115	4	5.5	2	1.5	6.1	0.40	1.48	0.82	1.58	E32213J
	120	41	41	32	2	1.5	E33213J	3EE	200000	277000	3200	4300	75	74	102	115	7	9	2	1.5	11	0.39	1.54	0.85	2.02	E33213J
65	140	36	33	28	3	2.5	E30313J	2GB	204000	239000	2800	3800	79	83	122	130	4	8	2.5	2	6.7	0.35	1.74	0.96	2.56	E30313J
	140	36	33	23	3	2.5	E30313DJ	7GB	176000	209000	2400	3400	79	79	111	133	4	13	2.5	2	-8.3	0.83	0.73	0.40	2.44	E30313DJ
	140	51	48	39	3	2.5	E32313J	2GD	276000	357000	2900	3900	79	80	117	130	4	12	2.5	2	16.3	0.35	1.74	0.96	3.64	E32313J

Note: (1) Minus value of load center "a" indicates that the center is located outside of cone backface.

Tapered Roller Bearings

Metric Series

Bore Diameter: 70~80mm



■ Dynamic equivalent radial load
 $P_r = X F_r + Y F_a$

$\frac{F_a}{F_r} \leq e$		$\frac{F_a}{F_r} > e$	
X	Y	X	Y
1	0	0.4	Y ₁

Values e and Y₁ from table.

■ Static equivalent radial load
 Larger value of following to be used:
 $P_{0r} = 0.5 F_r + Y_0 F_a$
 $P_{0r} = F_r$
 Values Y₀ from table.

1N=0.102kgf

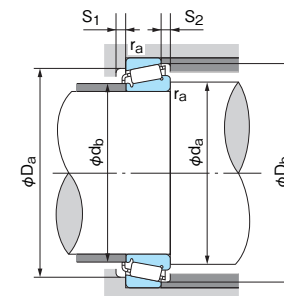
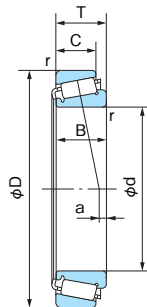
Boundary dimensions (mm)							Bearing No.	(Ref.) ISO355 Dimension series	Basic dynamic load rating Cr (N)	Basic static load rating Cor (N)	Limiting speed (min ⁻¹)		Abutment and fillet dimensions (mm)								Load center (mm) a (1°)	Constant e	Axial load factor		Mass(kg) Reference	Bearing No.
d	D	T	B	C	Cone r (min)	Cup r (min)					Grease lubrication	Oil lubrication	da (min)	db (max)	Da (min)	Db (min)	S1 (min)	S2 (min)	Cone ra (max)	Cup ra (max)			Y1	Y0		
70	100	20	20	16	1	1	E32914J	2BC	71000	115000	3500	4700	75.5	77	91	96	4	4	1	1	2.2	0.32	1.90	1.05	0.496	E32914J
	110	25	25	19	1.5	1.5	E32014J	4CC	108000	163000	3300	4400	78.5	78	98	105	5	6	1.5	1.5	1.4	0.43	1.38	0.76	0.884	E32014J
	110	31	31	25.5	1.5	1.5	E33014J	2CE	134000	208000	3300	4400	78.5	78	99	105	5	5.5	1.5	1.5	8.1	0.28	2.11	1.16	1.09	E33014J
	125	26.25	24	21	2	1.5	E30214J	3EB	138000	173000	3100	4100	80	81	110	118	4	5	2	1.5	0.3	0.42	1.43	0.79	1.32	E30214J
	125	33.25	31	27	2	1.5	E32214J	3EC	169000	225000	3100	4100	80	80	108	119	4	6	2	1.5	4.0	0.42	1.43	0.79	1.71	E32214J
	125	41	41	32	2	1.5	E33214J	3EE	206000	294000	3100	4100	80	79	107	120	7	9	2	1.5	9.8	0.41	1.47	0.81	2.16	E33214J
	150	38	35	30	3	2.5	E30314J	2GB	230000	273000	2600	3500	84	89	130	140	4	8	2.5	2	7.5	0.35	1.74	0.96	3.08	E30314J
	150	38	35	25	3	2.5	E30314DJ	7GB	197000	235000	2300	3200	84	84	118	142	4	13	2.5	2	-9.1	0.83	0.73	0.40	2.97	E30314DJ
75	105	20	20	16	1	1	E32915J	2BC	73600	123000	3300	4400	80.5	81	97	101	4	4	1	1	1.1	0.33	1.80	0.99	0.526	E32915J
	115	25	25	19	1.5	1.5	E32015J	4CC	110000	169000	3100	4200	83.5	83	103	110	5	6	1.5	1.5	-0.1	0.46	1.31	0.72	0.93	E32015J
	115	31	31	25.5	1.5	1.5	E33015J	2CE	141000	225000	3000	4100	83.5	83	104	110	6	5.5	1.5	1.5	8.1	0.30	2.01	1.11	1.16	E33015J
	125	37	37	29	2	1.5	E33115J	3DE	186000	280000	3000	4000	85	84	109	120	6	8	2	1.5	7.5	0.40	1.51	0.83	1.84	E33115J
	130	27.25	25	22	2	1.5	E30215J	4DB	142000	181000	2900	3900	85	86	115	124	4	5	2	1.5	-0.3	0.44	1.38	0.76	1.42	E30215J
	130	33.25	31	27	2	1.5	E32215J	4DC	174000	234000	2900	3900	85	85	114	123	4	6	2	1.5	3.0	0.44	1.38	0.76	1.77	E32215J
	130	41	41	31	2	1.5	E33215J	3EE	212000	310000	2900	3900	85	83	111	125	7	10	2	1.5	8.5	0.43	1.40	0.77	2.26	E33215J
	160	40	37	31	3	2.5	E30315	2GB	250000	297000	2500	3300	89	95	139	149	4	9	2.5	2	8.1	0.35	1.73	0.95	3.52	E30315
80	110	20	20	16	1	1	E32916J	2BC	76100	131000	3100	4200	85.5	86	101	106	4	4	1	1	-0.1	0.35	1.71	0.94	0.556	E32916J
	125	29	29	22	1.5	1.5	E32016J	3CC	147000	225000	2900	3900	88.5	89	112	120	6	7	1.5	1.5	2.3	0.42	1.42	0.78	1.32	E32016J
	125	36	36	29.5	1.5	1.5	E33016J	2CE	173000	288000	2900	3900	88.5	90	112	119	6	6.5	1.5	1.5	10.9	0.28	2.16	1.19	1.63	E33016J
	130	37	37	29	2	1.5	E33116J	3DE	191000	294000	2800	3800	90	89	114	126	6	8	2	1.5	6.5	0.42	1.44	0.79	1.93	E33116J
	140	28.25	26	22	2.5	2	E30216J	3EB	161000	202000	2700	3600	92	91	124	132	4	6	2	2	-0.3	0.42	1.43	0.79	1.72	E30216J
	140	35.25	33	28	2.5	2	E32216J	3EC	203000	271000	2700	3600	92	90	122	134	4	7	2	2	3.8	0.42	1.43	0.79	2.17	E32216J
	140	46	46	35	2.5	2	E33216	3EE	250000	371000	2700	3600	92	89	119	135	7	11	2	2	10.3	0.43	1.41	0.78	2.99	E33216
	170	42.5	39	33	3	2.5	E30316J	2GB	294000	355000	2300	3100	94	102	148	159	4	9.5	2.5	2	7.7	0.35	1.73	0.96	4.46	E30316J
80	170	42.5	39	27	3	2.5	E30316DJ	7GB	236000	282000	2000	2800	94	97	134	159	6	15.5	2.5	2	-11.0	0.83	0.73	0.40	4.12	E30316DJ
	170	61.5	58	48	3	2.5	E32316	2GD	378000	497000	2300	3100	94	98	142	159	4	13.5	2.5	2	19.5	0.35	1.73	0.95	6.32	E32316

Note: (1) Minus value of load center "a" indicates that the center is located outside of cone backface.

Tapered Roller Bearings

Metric Series

Bore Diameter: 85~95mm



■ Dynamic equivalent radial load
Pr=XFr+YFa

$\frac{F_a}{F_r} \leq e$		$\frac{F_a}{F_r} > e$	
X	Y	X	Y
1	0	0.4	Y ₁

Values e and Y₁ from table.

■ Static equivalent radial load

Larger value of following to be used:

Por=0.5Fr+Y₀Fa

Por=Fr

Values Y₀ from table.

1N=0.102kgf

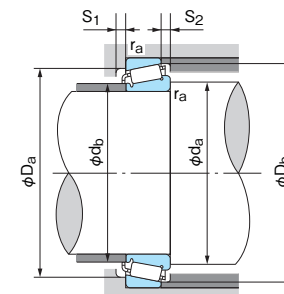
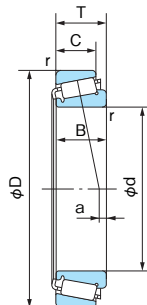
Boundary dimensions (mm)							Bearing No.	(Ref.) ISO355 Dimension series	Basic dynamic load rating Cr (N)	Basic static load rating Cor (N)	Limiting speed (min ⁻¹)		Abutment and fillet dimensions (mm)										Load center (mm) a (1)	Constant e	Axial load factor		Mass(kg) Reference	Bearing No.
d	D	T	B	C	Cone r (min)	Cup r (min)					Grease lubrication	Oil lubrication	d _a (min)	d _b (max)	D _a (min)	D _b (min)	S ₁ (min)	S ₂ (min)	Cone ra (max)	Cup	Y ₁	Y ₀						
85	120	23	23	18	1.5	1.5	E32917J	2BC	97100	165000	2900	3900	93.5	93	109	115	5	5	1.5	1.5	1.8	0.33	1.83	1.01	0.794	E32917J		
	130	29	29	22	1.5	1.5	E32017J	4CC	150000	234000	2800	3700	93.5	94	117	125	6	7	1.5	1.5	1.0	0.44	1.36	0.75	1.38	E32017J		
	130	36	36	29.5	1.5	1.5	E33017J	2CE	177000	300000	2800	3700	93.5	94	118	125	6	6.5	1.5	1.5	9.7	0.29	2.06	1.13	1.72	E33017J		
	140	41	41	32	2.5	2.5	E33117J	3DE	224000	346000	2600	3500	97	95	122	135	7	9	2	2	7.8	0.41	1.48	0.81	2.43	E33117J		
	150	30.5	28	24	2.5	2	E30217J	3EB	182000	231000	2500	3400	97	97	132	141	5	6.5	2	2	0.1	0.42	1.43	0.79	2.17	E30217J		
	150	38.5	36	30	2.5	2	E32217J	3EC	232000	315000	2500	3300	97	96	130	142	5	8.5	2	2	4.3	0.42	1.43	0.79	2.80	E32217J		
	150	49	49	37	2.5	2	E33217J	3EE	294000	439000	2500	3400	97	95	128	144	7	12	2	2	11.9	0.42	1.43	0.79	3.63	E33217J		
	180	44.5	41	34	4	3	E30317	—	305000	367000	2200	2900	103	107	156	167	5	10.5	3	2.5	8.7	0.35	1.73	0.95	4.97	E30317		
90	180	44.5	41	28	4	3	E30317DJ	—	263000	317000	1900	2600	103	103	143	169	6	16.5	3	2.5	-11.8	0.83	0.73	0.41	4.81	E30317DJ		
	180	63.5	60	49	4	3	E32317J	2GD	439000	587000	2200	3000	103	103	150	167	5	14.5	3	2.5	19.7	0.35	1.74	0.96	7.42	E32317J		
	125	23	23	18	1.5	1.5	E32918J	2BC	101000	175000	2800	3700	98.5	97	114	120	5	5	1.5	1.5	0.7	0.34	1.75	0.96	0.834	E32918J		
	140	32	32	24	2	1.5	E32018J	3CC	178000	276000	2600	3500	100	100	125	134	6	8	2	1.5	2.2	0.42	1.42	0.78	1.80	E32018J		
	140	39	39	32.5	2	2	E33018J	2CE	221000	367000	2600	3400	100	100	127	135	7	6.5	2	1.5	11.9	0.27	2.23	1.23	2.22	E33018J		
	160	32.5	30	26	2.5	2	E30218J	3FB	204000	261000	2400	3200	102	103	140	150	5	6.5	2	2	-0.1	0.42	1.43	0.79	2.65	E30218J		
	160	42.5	40	34	2.5	2	E32218J	3FC	263000	362000	2400	3200	102	102	138	152	5	8.5	2	2	5.5	0.42	1.43	0.79	3.47	E32218J		
	190	46.5	43	36	4	3	E30318	—	336000	407000	2100	2700	108	113	165	177	5	10.5	3	2.5	9.3	0.35	1.73	0.95	5.78	E30318		
95	190	46.5	43	30	4	3	E30318D	—	282000	336000	1700	2400	108	109	151	179	6	16.5	3	2.5	-12.6	0.81	0.74	0.41	5.60	E30318D		
	190	67.5	64	53	4	3	E32318J	—	461000	614000	2100	2800	108	108	157	177	5	14.5	3	2.5	20.9	0.35	1.74	0.96	8.61	E32318J		
	130	23	23	18	1.5	1.5	E32919J	2BC	104000	186000	2600	3500	103.5	102	119	125	5	5	1.5	1.5	-0.5	0.36	1.68	0.92	0.876	E32919J		
	145	32	32	24	2	1.5	E32019J	4CC	182000	287000	2500	3300	105	105	130	140	6	8	2	1.5	0.8	0.44	1.36	0.75	1.88	E32019J		
	145	39	39	32.5	2	1.5	E33019J	2CE	226000	382000	2500	3300	105	104	131	139	7	6.5	2	1.5	11.2	0.28	2.16	1.19	2.31	E33019J		
	170	34.5	32	27	3	2.5	E30219J	3FB	231000	299000	2200	3000	109	110	149	159	5	7.5	2.5	2	-0.4	0.42	1.43	0.79	3.20	E30219J		
	170	45.5	43	37	3	2.5	E32219J	3FC	311000	439000	2200	3000	109	108	145	161	5	8.5	2.5	2	6.6	0.42	1.43	0.79	4.34	E32219J		
	170	58	58	44	3	2.5	E33219J	3FE	374000	582000	2200	2900	109	107	144	163	9	14	2.5	2	15.2	0.41	1.47	0.81	5.66	E33219J		
95	200	49.5	45	38	4	3	30319	—	317000	368000	2000	2600	113	118	172	186	5	11.5	3	2.5	9.7	0.35	1.73	0.95	6.32	30319		
	200	49.5	45	32	4	3	E30319DJ	—	319000	391000	1700	2300	113	113	157	187	6	17.5	3	2.5	-13.2	0.81	0.73	0.40	6.68	E30319DJ		
	200	71.5	67	55	4	3	E32319J	—	517000	695000	2000	2600	113	115	166	186	5	16.5	3	2.5	21.7	0.35	1.74	0.96	10.1	E32319J		

Note: (1) Minus value of load center "a" indicates that the center is located outside of cone backface.

Tapered Roller Bearings

Metric Series

Bore Diameter: 100~110mm



■Dynamic equivalent radial load
 $P_r = X F_r + Y F_a$

$\frac{F_a}{F_r} \leq e$		$\frac{F_a}{F_r} > e$	
X	Y	X	Y
1	0	0.4	Y_1

Values e and Y_1 from table.

■Static equivalent radial load

Larger value of following to be used:

 $P_0 = 0.5 F_r + Y_0 F_a$ $P_0 = F_r$ Values Y_0 from table.

1N=0.102kgf

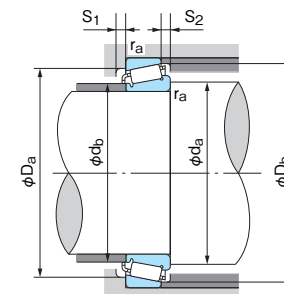
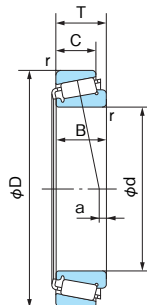
Boundary dimensions (mm)							Bearing No.	(Ref.) ISO355 Dimension series	Basic dynamic load rating Cr (N)	Basic static load rating Cor (N)	Limiting speed (min ⁻¹)		Abutment and fillet dimensions (mm)								Load center (mm) a (1)	Constant e	Axial load factor		Mass(kg) Reference	Bearing No.
d	D	T	B	C	Cone r (min)	Cup r (min)					Grease lubrication	Oil lubrication	da (min)	db (max)	Da (min)	Db (min)	S1 (min)	S2 (min)	Cone ra (max)	Cup ra (max)			Y1	Y0		
100	140	25	25	20	1.5	1.5	E32920J	2CC	126000	217000	2400	3300	108.5	108	128	135	5	5	1.5	1.5	1.0	0.33	1.82	1.00	1.19	E32920J
	150	32	32	24	2	1.5	E32020J	4CC	185000	298000	2400	3200	110	109	134	144	6	8	2	1.5	-0.6	0.46	1.31	0.72	1.95	E32020J
	150	39	39	32.5	2	1.5	E33020J	2CE	231000	397000	2400	3200	110	108	135	143	7	6.5	2	1.5	10.4	0.29	2.09	1.15	2.40	E33020J
	165	52	52	40	2.5	2.5	E33120J	3EE	325000	523000	2200	3000	112	111	142	159	8	12	2	2	11.9	0.41	1.48	0.81	4.29	E33120J
	180	37	34	29	3	2.5	E30220J	3FB	258000	338000	2100	2800	114	116	157	168	5	8	2.5	2	0.2	0.42	1.43	0.79	3.83	E30220J
	180	49	46	39	3	2.5	E32220J	3FC	347000	495000	2100	2800	114	114	154	171	5	10	2.5	2	6.9	0.42	1.43	0.79	5.21	E32220J
	180	63	63	48	3	2.5	E33220	3FE	431000	680000	2100	2800	114	112	151	172	10	15	2.5	2	17.3	0.40	1.48	0.82	6.92	E33220
	215	51.5	47	39	4	3	30320	—	344000	400000	1800	2400	118	127	184	200	6	12.5	3	2.5	10.1	0.35	1.73	0.95	7.76	30320
	215	51.5	47	34	4	3	30320D	—	318000	374000	1500	2100	118	121	183	204	5	17	3	2.5	-14.4	0.81	0.74	0.41	8.02	30320D
	215	77.5	73	60	4	3	32320	—	491000	637000	1800	2400	118	123	177	200	8	17.5	3	2.5	24.9	0.35	1.73	0.95	12.2	32320
	215	56.5	51	35	4	3	E31320J	—	373000	459000	1500	2200	118	120	183	202	6	17.5	3	2.5	-11.2	0.83	0.73	0.40	8.72	E31320J
105	145	25	25	20	1.5	1.5	E32921J	2CC	128000	224000	2400	3100	113.5	113	133	140	5	5	1.5	1.5	-0.1	0.34	1.75	0.96	1.23	E32921J
	160	35	35	26	2.5	2	E32021J	4DC	215000	344000	2200	3000	117	116	143	154	6	9	2	2	0.5	0.44	1.35	0.74	2.45	E32021J
	160	43	43	34	2.5	2	E33021J	2DE	267000	461000	2200	3000	117	116	145	153	7	9	2	2	12.1	0.28	2.12	1.17	3.08	E33021J
	190	39	36	30	3	2.5	E30221J	—	288000	380000	2000	2600	119	122	165	178	6	9	2.5	2	0.0	0.42	1.43	0.79	4.49	E30221J
	190	53	50	43	3	2.5	E32221J	3FC	392000	567000	2000	2700	119	120	161	180	6	10	2.5	2	8.2	0.42	1.43	0.79	6.37	E32221J
	225	53.5	49	41	4	3	30321	—	371000	432000	1700	2300	123	132	193	209	7	12.5	3	2.5	10.4	0.35	1.73	0.95	8.74	30321
	225	53.5	49	36	4	3	30321D	—	339000	396000	1400	2000	123	127	193	209	6	11	3	2.5	-15.6	0.81	0.74	0.41	8.76	30321D
	225	81.5	77	63	4	3	E32321J	2GD	635000	886000	1800	2300	123	128	185	209	8	18.5	3	2.5	25.4	0.35	1.74	0.96	14.9	E32321J
110	150	25	25	20	1.5	1.5	E32922J	2CC	129000	231000	2300	3000	118.5	118	138	145	5	5	1.5	1.5	-1.3	0.36	1.69	0.93	1.28	E32922J
	170	38	38	29	2.5	2	E32022J	4DC	248000	395000	2100	2800	122	122	152	163	7	9	2	2	1.9	0.43	1.39	0.77	3.12	E32022J
	170	47	47	37	2.5	2	E33022J	2DE	287000	502000	2100	2800	122	123	152	161	7	10	2	2	13.6	0.29	2.09	1.15	3.81	E33022J
	180	56	56	43	2.5	2	E33122J	3EE	369000	634000	2000	2700	122	121	155	174	9	13	2	2	11.5	0.42	1.43	0.79	5.33	E33122J
	200	41	38	32	3	2.5	E30222J	3FB	324000	434000	1900	2500	124	129	174	188	6	9	2.5	2	0.2	0.42	1.43	0.79	5.33	E30222J
	200	56	53	46	3	2.5	E32222J	3FC	438000	640000	1900	2500	124	126	170	190	6	10	2.5	2	9.3	0.42	1.43	0.79	7.45	E32222J
	240	54.5	50	42	4	3	E30322J	—	481000	590000	1600	2100	128	141	206	222	8	12.5	3	2.5	8.2	0.35	1.74	0.96	11.4	E30322J
	240	54.5	50	36	4	3	30322D	—	365000	429000	1400	1900	128	135	205	222	6	18	3	2.5	-17.0	0.81	0.74	0.41	10.2	30322D
	240	84.5	80	65	4	3	32322	—	607000	796000	1600	2200	128	137	198	222	9	19.5	3	2.5	27.2	0.35	1.73	0.95	16.6	32322

Note: (1) Minus value of load center "a" indicates that the center is located outside of cone backface.

Tapered Roller Bearings

Metric Series

Bore Diameter: 120~140mm



■ Dynamic equivalent radial load
 $P_r = X F_r + Y F_a$

$\frac{F_a}{F_r} \leq e$		$\frac{F_a}{F_r} > e$	
X	Y	X	Y
1	0	0.4	Y_1

Values e and Y_1 from table.

■ Static equivalent radial load

Larger value of following to be used:

 $P_{or} = 0.5 F_r + Y_0 F_a$ $P_{or} = F_r$ Values Y_0 from table.

1N=0.102kgf

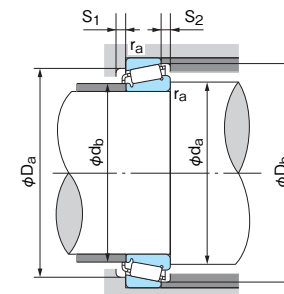
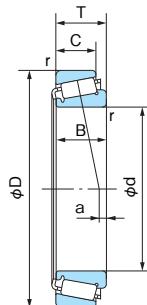
Boundary dimensions (mm)							Bearing No.	(Ref.) ISO355 Dimension series	Basic dynamic load rating Cr (N)	Basic static load rating Cor (N)	Limiting speed (min ⁻¹)		Abutment and fillet dimensions (mm)								Load center (mm) a (1)	Constant e	Axial load factor		Mass(kg) Reference	Bearing No.
d	D	T	B	C	Cone r (min)	Cup r (min)					Grease lubrication	Oil lubrication	da (min)	db (max)	Da (min)	Db (min)	S1 (min)	S2 (min)	Cone ra (max)	Cup ra (max)			Y1	Y0		
120	165	29	29	23	1.5	1.5	E32924J	2CC	172000	298000	2100	2700	128.5	128	152	160	6	6	1.5	1.5	-0.4	0.35	1.72	0.95	1.77	E32924J
	180	38	38	29	2.5	2	E32024J	4DC	258000	427000	2000	2600	132	131	161	173	7	9	2	2	-0.8	0.46	1.31	0.72	3.34	E32024J
	180	48	48	38	2.5	2	E33024J	2DE	299000	540000	2000	2600	132	132	160	171	6	10	2	2	11.8	0.31	1.97	1.08	4.16	E33024J
	200	62	62	48	2.5	2	E33124J	3FE	462000	785000	1800	2400	132	133	172	192	9	14	2	2	14.2	0.40	1.51	0.83	7.73	E33124J
	215	43.5	40	34	3	2.5	E30224J	4FE	347000	473000	1700	2300	134	140	187	203	6	9.5	2.5	2	-0.7	0.44	1.38	0.76	6.36	E30224J
	215	61.5	58	50	3	2.5	E32224J	4FD	470000	691000	1700	2300	134	136	181	204	7	11.5	2.5	2	9.9	0.44	1.38	0.76	9.04	E32224J
	260	59.5	55	46	4	3	30324	—	505000	611000	1500	2000	138	152	221	239	10	13.5	3	2.5	10.6	0.35	1.73	0.96	13.7	30324
	260	59.5	55	37	4	3	30324D	—	430000	512000	1200	1700	138	145	219	239	6	21	3	2.5	-18.3	0.81	0.74	0.41	13.0	30324D
	260	90.5	86	69	4	3	E32324J	2GD	800000	1110000	1500	2000	138	148	213	239	9	21.5	3	2.5	27.8	0.35	1.74	0.96	22.2	E32324J
130	260	68	62	42	4	3	E31324J	7GB	526000	665000	1300	1800	138	145	221	244	6	21	3	2.5	-13.9	0.83	0.73	0.40	15.4	E31324J
	180	32	32	25	2	1.5	E32926J	2CC	200000	368000	1900	2500	140	141	165	174	6	7	2	1.5	0.6	0.34	1.77	0.97	2.42	E32926J
	200	45	45	34	2.5	2	E32026J	4EC	340000	563000	1800	2300	142	144	178	192	8	11	2	2	2.1	0.43	1.38	0.76	5.04	E32026J
	200	55	55	43	2.5	2	E33026J	2EE	390000	705000	1700	2300	142	143	178	192	8	12	2	2	12.5	0.34	1.76	0.97	6.19	E33026J
	230	43.75	40	34	4	3	E30226J	4FB	377000	511000	1600	2100	148	152	203	218	7	9.5	3	2.5	-2.7	0.44	1.38	0.76	7.24	E30226J
	230	67.75	64	54	4	3	E32226J	4FD	554000	830000	1600	2200	148	146	193	219	7	13.5	3	2.5	11.7	0.44	1.38	0.76	11.5	E32226J
	280	63.75	58	41	5	4	E30326D	—	536000	665000	1200	1600	152	155	240	261	7	22	4	3	-20.2	0.81	0.74	0.41	16.4	E30326D
	280	63.75	58	49	5	4	30326	—	563000	684000	1400	1800	152	164	239	255	8	14.5	4	3	10.9	0.35	1.73	0.95	16.9	30326
	280	98.75	93	78	5	4	32326	—	852000	1160000	1400	1800	152	163	226	259	10	15	4	3	29.6	0.35	1.73	0.95	26.5	32326
140	280	72	66	44	5	4	E31326J	7GB	589000	748000	1200	1600	152	155	236	261	7	23	4	3	-15.3	0.83	0.73	0.40	18.9	E31326J
	190	32	32	25	2	1.5	E32928J	2CC	206000	390000	1800	2300	150	150	174	184	6	7	2	1.5	-1.6	0.36	1.67	0.92	2.57	E32928J
	210	45	45	34	2.5	2	E32028J	4DC	346000	585000	1700	2200	152	153	187	202	8	11	2	2	-0.6	0.46	1.31	0.72	5.28	E32028J
	210	56	56	44	2.5	2	E33028J	2DE	406000	758000	1600	2200	152	152	186	202	7	12	2	2	10.4	0.36	1.67	0.92	6.61	E33028J
	250	45.75	42	36	4	3	E30228	—	405000	538000	1500	1900	158	163	219	237	9	9.5	3	2.5	-3.4	0.43	1.39	0.77	8.9	E30228
	250	71.75	68	58	4	3	E32228J	4FD	636000	961000	1500	2000	158	158	210	238	9	13.5	3	2.5	11.7	0.44	1.39	0.76	14.7	E32228J
	300	67.75	62	44	5	4	30328D	—	525000	627000	1100	1500	162	169	254	280	7	23	4	3	-22.4	0.81	0.74	0.41	20.0	30328D
	300	67.75	62	53	5	4	30328	—	626000	761000	1300	1700	162	179	254	273	10	14.5	4	3	12.2	0.35	1.73	0.95	20.4	30328
	300	107.75	102	85	5	4	32328	—	958000	1320000	1300	1700	162	175	246	280	10	17	4	3	34.1	0.35	1.73	0.95	33.5	32328
	300	77	70	47	5	4	E31328J	7GB	674000	865000	1100	1500	162	167	254	280	8	26	4	3	-16.8	0.83	0.73	0.40	23.3	E31328J

Note: (1) Minus value of load center "a" indicates that the center is located outside of cone backface.

Tapered Roller Bearings

Metric Series

Bore Diameter: 150~180mm



■ Dynamic equivalent radial load
 $P_r = X F_r + Y F_a$

$\frac{F_a}{F_r} \leq e$		$\frac{F_a}{F_r} > e$	
X	Y	X	Y
1	0	0.4	Y_1

Values e and Y_1 from table.

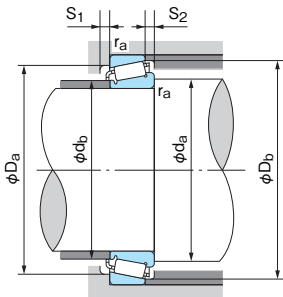
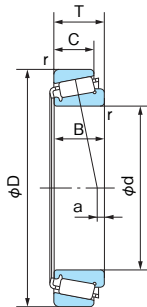
■ Static equivalent radial load
 Larger value of following to be used:
 $P_{0r} = 0.5 F_r + Y_0 F_a$
 $P_{0r} = F_r$
 Values Y_0 from table.

1N=0.102kgf

Boundary dimensions (mm)							Bearing No.	(Ref.) ISO355 Dimension series	Basic dynamic load rating Cr (N)	Basic static load rating Cor (N)	Limiting speed (min ⁻¹)		Abutment and fillet dimensions (mm)										Load center (mm) a (ʹ)	Constant e	Axial load factor		Mass(kg) Reference	Bearing No.
d	D	T	B	C	Cone r (min)	Cup r (min)					Grease lubrication	Oil lubrication	d _a (min)	db (max)	D _a (min)	D _b (min)	S ₁ (min)	S ₂ (min)	Cone ra (max)	Cup ra (max)	Y ₁	Y ₀						
150	210	38	38	30	2.5	2	E32930J	2DC	286000	536000	1600	2100	162	163	194	202	7	8	2	2	1.9	0.33	1.83	1.01	3.96	E32930J		
	225	48	48	36	3	2.5	E32030J	4EC	391000	668000	1500	2000	164	164	200	216	8	12	2.5	2	−0.8	0.46	1.31	0.72	6.41	E32030J		
	270	49	45	38	4	3	E30230	—	466000	625000	1300	1800	168	175	234	255	9	11	3	2.5	−2.7	0.43	1.39	0.77	10.9	E30230		
	270	77	73	60	4	3	E32230J	4GD	704000	1070000	1300	1800	168	170	226	254	8	17	3	2.5	11.8	0.44	1.38	0.76	18.2	E32230J		
	320	72	65	46	5	4	30330D	—	616000	750000	970	1400	172	183	270	301	9	26	4	3	−24.0	0.81	0.74	0.41	23.9	30330D		
	320	72	65	55	5	4	30330	—	717000	962000	1200	1500	172	193	272	292	12	17	4	3	10.2	0.35	1.73	0.95	25.4	30330		
	320	114	108	90	5	4	E32330	—	1240000	1790000	1200	1600	172	187	263	298	10	17	4	3	35.6	0.35	1.74	0.96	42.0	E32330		
160	220	38	38	30	2.5	2	E32932J	2DC	295000	568000	1500	2000	172	173	204	212	7	8	2	2	−0.4	0.35	1.73	0.95	4.19	E32932J		
	240	51	51	38	3	2.5	E32032J	4EC	440000	758000	1400	1900	174	175	213	231	8	13	2.5	2	−1.1	0.46	1.31	0.72	7.75	E32032J		
	290	52	48	40	4	3	30232	—	483000	637000	1200	1600	178	189	252	269	8	12	3	2.5	−5.4	0.46	1.31	0.72	13.3	30232		
	290	84	80	67	4	3	E32232J	4GD	795000	1210000	1200	1700	178	182	242	274	10	17	3	2.5	13.7	0.44	1.38	0.76	23.2	E32232J		
	340	75	68	48	5	4	30332D	—	742000	933000	900	1300	182	195	290	320	9	27	4	3	−26.8	0.81	0.74	0.41	29.1	30332D		
	340	75	68	58	5	4	30332	—	793000	981000	1100	1400	182	205	289	310	12	17	4	3	11.5	0.35	1.73	0.95	28.7	30332		
	340	121	114	95	5	4	32332	—	1220000	1720000	1100	1400	182	200	277	316	10	18	4	3	38	0.35	1.73	0.95	47.9	32332		
170	230	38	38	34	2.5	2	E32934J	3DC	296000	606000	1400	1900	182	183	213	222	7	8	2	2	−4.0	0.38	1.57	0.86	4.49	E32934J		
	260	57	57	43	3	2.5	E32034J	4EC	526000	905000	1300	1700	184	187	230	249	10	14	2.5	2	1.2	0.44	1.35	0.74	10.5	E32034J		
	310	57	52	43	5	4	30234	—	544000	726000	1100	1500	192	202	269	288	8	4	4	3	−4.8	0.46	1.31	0.72	16.5	30234		
	310	91	86	71	5	4	E32234J	4GD	1000000	1610000	1100	1500	192	195	259	294	11	20	4	3	16.1	0.44	1.38	0.76	28.8	E32234J		
	360	80	72	50	5	4	30334D	—	762000	1040000	830	1200	192	211	310	333	9	30	4	3	−28.3	0.81	0.74	0.41	34.3	30334D		
	360	80	72	62	5	4	30334	—	828000	1020000	1000	1300	192	218	306	329	13	18	4	3	12.3	0.35	1.73	0.95	33.0	30334		
	360	127	120	100	5	4	32334	—	1310000	1830000	1000	1300	192	200	295	337	14	26	4	3	40.9	0.35	1.73	0.95	55.8	32334		
180	250	45	45	34	2.5	2	E32936J	4DC	357000	735000	1300	1700	192	193	225	241	8	11	2	2	−8.5	0.48	1.25	0.69	6.64	E32936J		
	280	64	64	48	3	2.5	E32036J	4EC	644000	1100000	1200	1600	194	199	247	268	10	16	2.5	2	4.5	0.42	1.42	0.78	14.1	E32036J		
	320	57	52	43	5	4	E30236J	4GB	615000	870000	1100	1400	202	211	278	297	9	14	4	3	−6.6	0.45	1.33	0.73	18.3	E30236J		
	320	91	86	71	5	4	E32236J	4GD	957000	1520000	1100	1500	202	204	267	303	10	20	4	3	13.2	0.45	1.33	0.73	29.9	E32236J		
	380	83	75	52	5	4	30336D	—	833000	1150000	780	1100	202	225	330	351	10	31	4	3	−29.8	0.81	0.74	0.41	40.1	30336D		
	380	83	75	64	5	4	30336	—	901000	1110000	940	1300	202	227	318	346	13	19	4	3	12	0.35	1.73	0.95	39.7	30336		
	380	134	126	105	5	4	32336	—	1410000	1980000	960	1300	202	215	310	355	14	27	4	3	42.2	0.35	1.73	0.95	67.0	32336		

Note: (1) Minus value of load center "a" indicates that the center is located outside of cone backface.

Tapered Roller Bearings
 Metric Series
 Bore Diameter: 190~260mm



Dynamic equivalent radial load
 $P_r = X F_r + Y F_a$

$\frac{F_a}{F_r} \leq e$		$\frac{F_a}{F_r} > e$	
X	Y	X	Y
1	0	0.4	Y_1

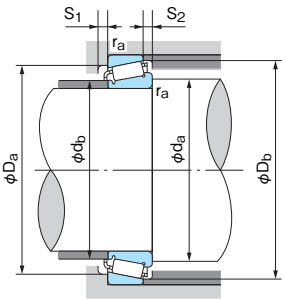
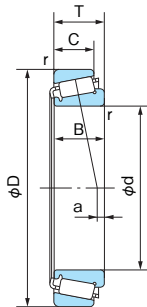
Values e and Y_1 from table.

Static equivalent radial load
 Larger value of following to be used:
 $P_0 = 0.5 F_r + Y_0 F_a$
 $P_0 = F_r$
 Values Y_0 from table.

Boundary dimensions (mm)							Bearing No.	(Ref.) ISO355 Dimension series	Basic dynamic load rating Cr (N)	Basic static load rating Cor (N)	Limiting speed (min ⁻¹)		Abutment and fillet dimensions (mm)								Load center (mm) a (1)	Constant e	Axial load factor		Mass(kg) Reference	Bearing No.
d	D	T	B	C	Cone r (min)	Cup r (min)					Grease lubrication	Oil lubrication	da (min)	db (max)	Da (min)	Db (min)	S1 (min)	S2 (min)	Cone ra (max)	Cup ra (max)			Y1	Y0		
190	260	45	45	34	2.5	2	E32938J	4DC	366000	789000	1200	1600	202	204	235	252	8	11	2	2	-10.0	0.48	1.26	0.69	6.89	E32938J
	290	64	64	48	3	2.5	E32038J	4FD	654000	1170000	1100	1500	204	209	257	279	10	16	2.5	2	1.1	0.44	1.36	0.75	14.7	E32038J
	340	60	55	46	5	4	E30238J	4GB	729000	1030000	1000	1400	212	225	298	318	12	13	4	3	-6.4	0.44	1.38	0.76	21.9	E30238J
	340	97	92	75	5	4	E32238J	4GD	1090000	1740000	1000	1400	208	216	290	330	6	12	4	3	15	0.46	1.31	0.72	33.9	E32238J
	400	86	78	52	6	5	30338D	—	950000	1210000	740	1000	218	232	350	372	11	34	5	4	-33.2	0.81	0.74	0.41	44.8	30338D
	400	86	78	65	5	5	30338	—	1010000	1250000	880	1200	218	241	342	370	10	20	5	4	12.8	0.35	1.73	0.95	46.2	30338
	400	140	132	109	5	5	32338	—	1550000	2190000	890	1200	218	225	330	375	14	30	5	4	43.5	0.35	1.73	0.95	76.6	32338
200	280	51	51	39	3	2.5	E32940J	3EC	486000	958000	1100	1500	214	216	257	271	9	12	2.5	2	-2.6	0.39	1.52	0.84	9.44	E32940J
	310	70	70	53	3	2.5	E32040J	4FD	755000	1340000	1100	1400	214	221	273	297	11	17	2.5	2	3.1	0.43	1.39	0.77	19.1	E32040J
	360	64	58	48	5	4	E30240J	4GB	792000	1120000	940	1200	222	238	315	336	12	15	4	3	-6.3	0.44	1.38	0.76	26.4	E30240J
	360	104	98	82	5	4	E32240J	4GD	1240000	1880000	960	1300	222	225	302	340	11	22	4	3	19.4	0.41	1.48	0.81	44.2	E32240J
	420	89	80	56	6	5	30340D	—	904000	1230000	690	970	228	248	365	385	11	33	5	4	-33.6	0.81	0.74	0.41	50.6	30340D
	420	89	80	67	5	5	30340	—	1120000	1450000	820	1100	228	255	354	385	11	21	5	4	9.2	0.35	1.73	0.95	53.5	30340
	420	146	138	115	5	5	32340	—	1790000	2580000	830	1100	228	240	345	395	16	30	5	4	43.1	0.35	1.73	0.95	91.0	32340
220	300	51	51	39	3	2.5	E32944J	3EC	498000	1010000	1000	1400	234	234	275	290	9	12	2.5	2	-7.6	0.43	1.41	0.78	10.1	E32944J
	340	76	76	57	4	3	E32044J	4FD	894000	1620000	940	1300	238	243	300	326	12	19	3	2.5	3.2	0.43	1.39	0.77	25.2	E32044J
	400	72	65	54	5	4	E30244J	—	1010000	1440000	830	1100	242	263	344	371	14	17	4	3	-4.5	0.44	1.43	0.79	35.9	E30244J
	400	114	108	90	5	4	32244	—	1190000	1930000	830	1100	242	260	333	377	16	14	4	3	18.1	0.43	1.39	0.77	56.8	32244
	460	97	88	73	5	5	30344	—	1260000	1680000	730	980	248	282	386	420	12	23	5	4	12.4	0.35	1.73	0.95	69.0	30344
	460	154	145	122	5	5	32344	—	2100000	3170000	750	1000	242	267	375	423	10	18	5	4	43	0.35	1.73	0.95	108	32344
	320	51	51	39	3	2.5	E32948J	4EC	515000	1090000	940	1300	254	254	294	311	9	12	2.5	2	-13.5	0.46	1.31	0.72	10.9	E32948J
240	360	76	76	57	4	3	E32048J	4FD	924000	1720000	870	1300	258	261	318	346	12	19	3	2.5	-2.5	0.46	1.31	0.72	26.8	E32048J
	440	79	72	60	5	4	E30248	—	1230000	1790000	730	980	262	287	377	409	14	18	4	3	-3.7	0.42	1.43	0.79	49.5	E30248
	440	127	120	100	5	4	E32248	—	1830000	3010000	740	980	262	282	365	415	16	14	4	3	22	0.44	1.38	0.76	80	E32248
	500	105	95	80	5	5	30348	—	1520000	2100000	670	890	268	308	414	445	16	21	5	4	13.3	0.35	1.73	0.95	87.3	30348
	500	165	155	132	5	5	32348	—	2510000	3870000	670	890	268	298	413	461	16	20	5	4	47.6	0.35	1.73	0.95	144	32348
	360	63.5	63.5	48	3	2.5	E32952J	—	741000	1550000	830	1100	274	279	328	347	11	15.5	2.5	2	-6.1	0.41	1.48	0.81	18.9	E32952J
	400	87	87	65	5	4	E32052J	—	1170000	2170000	770	1000	282	287	352	383	14	22	4	3	2.0	0.43	1.38	0.76	39.5	E32052J
260	480	89	80	67	6	5	30252	—	1210000	1860000	650	870	288	310	415	450	14	21	5	4	-4.6	0.42	1.44	0.79	64.9	30252
	480	137	130	106	6	5	32252	—	1760000	2870000	660	880	288	300	400	455	16	30	5	4	21.8	0.43	1.39	0.77	102	32252

Note: (1) Minus value of load center "a" indicates that the center is located outside of cone backface.

Tapered Roller Bearings
 Metric Series
 Bore Diameter: 280~320mm



Dynamic equivalent radial load
 $P_r = X F_r + Y F_a$

$\frac{F_a}{F_r} \leq e$		$\frac{F_a}{F_r} > e$	
X	Y	X	Y
1	0	0.4	Y_1

Values e and Y_1 from table.

Static equivalent radial load
 Larger value of following to be used:
 $P_{0r} = 0.5 F_r + Y_0 F_a$
 $P_{0r} = F_r$
 Values Y_0 from table.

1N=0.102kgf

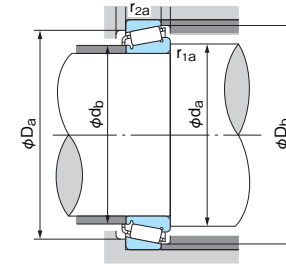
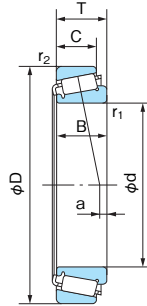
Boundary dimensions (mm)							Bearing No.	(Ref.) ISO355 Dimension series	Basic dynamic load rating Cr (N)	Basic static load rating Cor (N)	Limiting speed (min ⁻¹)		Abutment and fillet dimensions (mm)								Load center (mm) a (1)	Constant e	Axial load factor		Mass(kg) Reference	Bearing No.
d	D	T	B	C	Cone r (min)	Cup r (min)					Grease lubrication	Oil lubrication	da (min)	db (max)	Da (min)	Db (min)	S1 (min)	S2 (min)	Cone ra (max)	Cup ra (max)			Y1	Y0		
280	380	63.5	63.5	48	3	2.5	E32956J	4EC	760000	1630000	770	1000	294	298	347	368	11	15.5	2.5	2	-11.6	0.43	1.39	0.76	20.1	E32956J
	420	87	87	65	5	4	E32056J	4FC	1200000	2280000	720	960	302	305	370	405	14	22	4	3	-4.1	0.46	1.31	0.72	41.7	E32056J
	500	89	80	67	6	5	30256	—	1260000	1920000	610	810	308	325	440	475	14	21	5	4	-7.2	0.42	1.44	0.79	67.6	30256
	500	137	130	106	6	5	32256	—	1860000	3150000	610	810	308	325	420	474	16	30	5	4	19.8	0.43	1.39	0.77	108.0	32256
300	420	76	76	57	4	3	E32960J	3FD	1050000	2210000	680	910	318	324	383	405	12	19	3	2.5	-3.9	0.39	1.52	0.84	32.4	E32960J
	460	100	100	74	5	4	E32060J	4GD	1430000	2660000	640	850	322	329	404	439	15	26	4	3	2.1	0.43	1.38	0.76	57.5	E32060J
	540	96	85	71	6	5	30260	—	1510000	2360000	550	730	328	350	475	505	14	24	5	4	-7.9	0.42	1.44	0.79	84.7	30260
	540	149	140	115	6	5	32260	—	2310000	4060000	570	780	322	343	456	510	6	15	5	4	17	0.47	1.27	0.70	132	32260
320	440	76	76	57	4	3	E32964J	3FD	1060000	2270000	640	850	338	342	401	426	12	19	3	2.5	-9.0	0.42	1.44	0.79	34.0	E32964J
	480	100	100	74	5	4	E32064J	4GD	1510000	2810000	600	800	342	344	418	461	16	26	4	3	-3.0	0.46	1.31	0.72	58.7	E32064J
	580	104	92	75	6	5	30264	—	1740000	2770000	490	660	348	370	505	540	14	28	5	4	-7.9	0.42	1.44	0.79	108	30264

Note: (1) Minus value of load center "a" indicates that the center is located outside of cone backface.

Tapered Roller Bearings

Inch Series

Bore Diameter: 15.875~30.163mm



■ Dynamic equivalent radial load
 $P_r = X F_r + Y F_a$

$\frac{F_a}{F_r} \leq e$		$\frac{F_a}{F_r} > e$	
X	Y	X	Y
1	0	0.4	Y ₁

Values e and Y₁ from table.

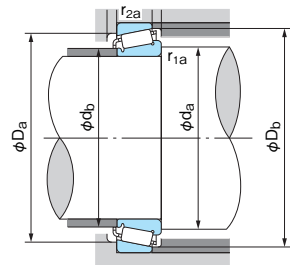
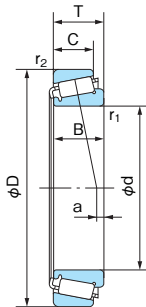
■ Static equivalent radial load
 Larger value of following to be used:
 $P_{0r} = 0.5 F_r + Y_0 F_a$
 $P_{0r} = F_r$
 Values Y₀ from table.

1N=0.102kgf

Boundary dimensions (mm)							Bearing No.		Basic load rating		Limiting speed (min ⁻¹)		Abutment and fillet dimensions (mm)						Load center (mm) a (°)	Constant e	Axial load factor		Mass(kg) Reference		Bearing No.	
d	D	T	B	C	r ₁ (min)	r ₂ (min)	Cone	Cup	Cr (kN)	Cor (kN)	Grease	Oil	d _a	d _b	D _a	D _b	r _{1a}	r _{2a}			Y ₁	Y ₀	Cone	Cup	Cone	Cup
15.875	42.863	14.288	14.288	9.525	1.60	1.60	H-11590	H-11520	17.8	17.7	10000	14000	24.5	22.5	34.5	39.5	1.60	1.60	1.2	0.70	0.85	0.47	0.06	0.04	H-11590	H-11520
17.463	39.878	13.843	14.605	10.668	1.20	1.20	H-LM11749R	H-LM11710	25.4	26.0	11000	14000	23.0	21.5	34.0	37.0	1.20	1.20	5.2	0.29	2.10	1.15	0.058	0.028	H-LM11749R	H-LM11710
19.050	45.237	15.494	16.637	12.065	1.20	1.20	H-LM11949	H-LM11910	29.4	30.1	9400	13000	25.0	23.5	39.5	41.5	1.20	1.20	5.5	0.30	2.00	1.10	0.081	0.044	H-LM11949	H-LM11910
	49.225	18.034	19.050	14.288	1.20	1.20	H-09067	H-09195	37.7	37.7	8900	12000	25.5	24.0	42.0	44.5	1.20	1.20	7.4	0.27	2.26	1.24	0.114	0.065	H-09067	H-09195
	53.975	22.225	21.839	15.875	1.57	2.36	H-21075	H-21212	42	41.2	8400	11000	31.5	26.0	43.0	50.0	1.57	2.36	5.6	0.59	1.02	0.56	0.159	0.095	H-21075	H-21212
21.430	50.005	17.526	18.288	13.970	1.17	1.17	H-M12649	H-M12610	39.1	40.7	8500	11000	27.5	25.5	44.0	46.0	1.17	1.17	6.4	0.28	2.16	1.19	0.119	0.058	H-M12649	H-M12610
21.987	45.237	15.494	16.637	12.065	1.27	1.27	H-LM12749	H-LM12710	30.1	34.6	8900	12000	27.5	26.0	39.5	42.0	1.27	1.27	5.5	0.31	1.96	1.08	0.078	0.038	H-LM12749	H-LM12710
	45.975	15.494	16.637	12.065	1.27	1.27	H-LM12749	H-LM12711	30.1	34.6	8900	12000	27.5	26.0	40.0	42.5	1.27	1.27	5.5	0.31	1.96	1.08	0.078	0.043	H-LM12749	H-LM12711
22.225	52.388	19.368	20.168	14.288	1.60	1.60	H-1380	H-1328	36.7	37.9	8000	11000	29.5	29.5	45.0	48.5	1.60	1.60	7.7	0.29	2.05	1.13	0.132	0.066	H-1380	H-1328
	56.896	19.368	19.837	15.875	1.20	1.20	H-1755	H-1729	40.0	43.1	7600	10000	29.0	27.5	49.0	51.0	1.20	1.20	7.1	0.31	1.95	1.07	0.150	0.100	H-1755	H-1729
	57.150	22.225	22.225	17.463	0.80	1.60	H-1280	H-1220	52.6	55.7	7600	10000	29.5	29.0	49.0	52.0	0.80	1.60	7.9	0.35	1.73	0.95	0.189	0.105	H-1280	H-1220
23.812	56.896	19.368	19.837	15.875	0.80	1.20	H-1779	H-1729	40.0	43.1	7600	10000	29.5	28.5	49.0	51.0	0.80	1.20	7.1	0.31	1.95	1.07	0.141	0.100	H-1779	H-1729
25.400	50.292	14.224	14.732	10.668	1.20	1.20	H-L44643R	H-L44610	31.2	37.0	7800	10000	31.5	29.5	44.5	47.0	1.20	1.20	3.2	0.37	1.60	0.88	0.092	0.039	H-L44643R	H-L44610
	57.150	19.431	19.431	14.732	1.57	1.57	H-M84548	H-M84510	42.2	49.2	7300	9700	36.0	33.0	48.5	54.0	1.57	1.57	3.4	0.55	1.10	0.60	0.156	0.088	H-M84548	H-M84510
	61.999	19.050	20.638	14.288	3.60	1.20	H-15100	H-15245	44.6	50.7	6400	8600	38.0	31.5	55.0	58.0	3.60	1.20	5.7	0.35	1.71	0.94	0.215	0.081	H-15100	H-15245
	61.999	19.050	20.638	14.288	0.80	1.20	H-15101	H-15245	44.6	50.7	6400	8600	32.5	31.5	55.0	58.0	0.80	1.20	5.7	0.35	1.71	0.94	0.215	0.081	H-15101	H-15245
	64.292	21.433	21.433	16.670	1.57	1.57	H-M86643R	H-M86610	55.2	70.7	6400	8500	38.0	36.5	54.0	61.0	1.57	1.57	3.4	0.55	1.10	0.60	0.248	0.127	H-M86643R	H-M86610
	65.088	22.225	21.463	15.875	1.60	1.60	H-23100	H-23256	47.8	51.7	5600	7900	39.0	34.5	53.0	61.0	1.60	1.60	2.2	0.73	0.82	0.45	0.231	0.141	H-23100	H-23256
26.157	61.913	19.050	20.638	14.288	0.80	2.00	H-15103	H-15243	44.6	50.7	6400	8600	33.0	32.5	55.0	58.0	0.80	2.00	5.7	0.35	1.71	0.94	0.213	0.079	H-15103	H-15243
	61.999	19.050	20.638	14.288	0.80	1.20	H-15103	H-15245	44.6	50.7	6400	8600	33.0	32.5	55.0	58.0	0.80	1.20	5.7	0.35	1.71	0.94	0.213	0.081	H-15103	H-15245
26.988	50.292	14.224	14.732	10.668	3.60	1.20	H-L44649R	H-L44610	31.2	37	7800	10000	37.5	31.0	44.5	47.0	3.60	1.20	3.2	0.37	1.60	0.88	0.083	0.039	H-L44649R	H-L44610
	61.999	19.050	20.638	14.288	0.80	1.20	H-15106	H-15245	44.6	50.7	6400	8600	33.5	33.0	55.0	58.0	0.80	1.20	5.7	0.35	1.71	0.94	0.206	0.081	H-15106	H-15245
	63.500	20.638	20.638	15.875	0.80	1.20	H-15106	H-15250	44.6	50.7	6400	8600	33.5	33.0	56.0	59.0	0.80	1.20	5.7	0.35	1.71	0.94	0.206	0.112	H-15106	H-15250
	63.500	20.638	20.638	15.875	0.80	1.60	H-15106	H-15250X	44.6	50.7	6400	8600	33.5	33.0	55.0	59.0	0.80	1.60	5.7	0.35	1.71	0.94	0.206	0.111	H-15106	H-15250X
28.575	57.150	19.845	19.355	15.875	3.60	1.60	H-1988R	H-1922	48.8	57.1	7000	9300	39.5	33.5	51.0	53.5	3.60	1.60	5.9	0.33	1.82	1.00	0.151	0.076	H-1988R	H-1922
	61.999	19.050	20.638	14.288	3.60	1.20	H-15112	H-15245	44.6	50.7	6400	8600	40.0	34.0	55.0	58.0	3.60	1.20	5.7	0.35	1.71	0.94	0.193	0.081	H-15112	H-15245
	63.500	20.638	20.638	15.875	3.60	1.20	H-15112	H-15250	44.6	50.7	6400	8600	40.0	34.0	56.0	59.0	3.60	1.20	5.7	0.35	1.71	0.94	0.193	0.112	H-15112	H-15250
	64.292	21.433	21.433	16.670	1.60	1.60	H-M86647R	H-M86610	55.2	70.7	6400	8500	40.0	38.0	54.0	61.0	1.60	1.60	3.4	0.55	1.10	0.60	0.225	0.127	H-M86647R	H-M86610
	68.263	22.225	22.225	17.463	0.80	1.60	H-02474	H-02420	51.0	61.1	6000	8000	36.5	36.0	59.0	63.0	0.80	1.60	5.1	0.42	1.44	0.79	0.252	0.150	H-02474	H-02420
	73.025	22.225	22.225	17.463	0.80	3.20	H-02872	H-02820	55.0	65.7	5500	7400	37.5	37.0	62.0	68.0	0.80	3.20	3.7	0.45	1.32	0.73	0.319	0.158	H-02872	H-02820
	73.025	22.225	22.225	17.463	0.80	3.20	H-02872	H-02820	55.0	65.7	5500	7400	37.5	37.0	62.0	68.0	0.80	3.20	3.7	0.45	1.32	0.73	0.319	0.158	H-02872	H-02820
29.000	50.292	14.224	14.732	10.668	3.60	1.27	H-L45449	H-L45410	28.9	37.2	7600	10000	39.5	33.0	44.5	48.0	3.60	1.27	3.3	0.37	1.62	0.89	0.079	0.036	H-L45449	H-L45410
29.987	61.999	19.050	20.638	14.288	1.20	1.20	H-15117	H-15245	44.6	50.7	6400	8600	36.5	35.0	55.0	58.0	1.20	1.20	5.7	0.35	1.71	0.94	0.184	0.081	H-15117	H-15245
30.000	72.085	22.385	19.202	18.415	0.80	2.40	H-14118	H-14283	46.1	55	5900	7800	37.0	36.5	60.0	65.0	0.80	2.40	4.4	0.38	1.57	0.86	0.224	0.21	H-14118	H-14283
30.163	64.292	21.433	21.433	16.670	1.57	1.57	H-M86649R	H-M86610	55.2	70.7	6400	8500	41.0	38.0	54.0	61.0	1.57	1.57	3.4	0.55	1.10	0.60	0.213	0.127	H-M86649R	H-M86610
	68.263	22.225	22.225	17.463	2.40	1.60	H-M88043	H-M88010	56.1	71.1	6000	7900	43.5	39.5	58.0	65.0	2.40	1.60	3.0	0.55	1.10	0.60	0.258	0.144	H-M88043	H-M88010

Note: (°) Minus value of load center "a" indicates that the center is located outside of cone backface.

Tapered Roller Bearings
Inch Series
Bore Diameter: 30.213~33.338mm



Dynamic equivalent radial load

$P_r = X F_r + Y F_a$

$\frac{F_a}{F_r} \leq e$		$\frac{F_a}{F_r} > e$	
X	Y	X	Y
1	0	0.4	Y_1

Values e and Y_1 from table.

Static equivalent radial load

Larger value of following to be used:

$P_0 = 0.5 F_r + Y_0 F_a$

$P_0 = F_r$

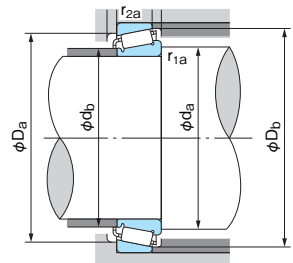
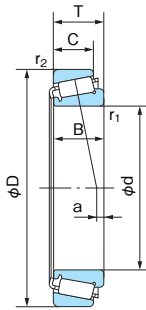
Values Y_0 from table.

1N=0.102kgf

Boundary dimensions (mm)							Bearing No.		Basic load rating		Limiting speed (min ⁻¹)		Abutment and fillet dimensions (mm)						Load center (mm) a (1)	Constant e	Axial load factor		Mass(kg) Reference		Bearing No.	
d	D	T	B	C	r ₁ (min)	r ₂ (min)	Cone	Cup	Cr (kN)	Cor (kN)	Grease	Oil	d _a	d _b	D _a	D _b	r _{1a}	r _{2a}			Y ₁	Y ₀	Cone	Cup	Cone	Cup
30.213	61.999	19.050	20.638	14.288	3.60	1.20	H-15118	H-15245	44.6	50.7	6400	8600	41.5	35.5	55.0	58.0	3.60	1.20	5.7	0.35	1.71	0.94	0.181	0.081	H-15118	H-15245
	61.999	19.050	20.638	14.288	0.80	1.20	H-15120	H-15245	44.6	50.7	6400	8600	36.0	35.5	55.0	58.0	0.80	1.20	5.7	0.35	1.71	0.94	0.183	0.081	H-15120	H-15245
	63.500	20.638	20.638	15.875	3.60	1.20	H-15118	H-15250	44.6	50.7	6400	8600	41.5	35.5	56.0	59.0	3.60	1.20	5.7	0.35	1.71	0.94	0.181	0.112	H-15118	H-15250
	63.500	20.638	20.638	15.875	3.60	1.60	H-15118	H-15250X	44.6	50.7	6400	8600	41.5	35.5	55.0	59.0	3.60	1.60	5.7	0.35	1.71	0.94	0.181	0.111	H-15118	H-15250X
30.226	69.012	19.845	19.583	15.875	0.80	1.20	H-14116	H-14276	46.1	55	5900	7800	37.0	36.5	60.0	63.0	0.80	1.20	4.4	0.38	1.57	0.86	0.226	0.134	H-14116	H-14276
31.750	59.131	15.875	16.764	11.811	SP	1.20	H-LM67048	H-LM67010	35.8	43.1	6600	8800	42.5	36.0	52.0	56.0	SP	1.20	2.9	0.41	1.46	0.80	0.120	0.062	H-LM67048	H-LM67010
	61.999	18.161	19.050	14.288	SP	1.20	H-15123	H-15245	44.6	50.7	6400	8600	42.5	36.5	55.0	58.0	SP	1.20	4.8	0.35	1.71	0.94	0.157	0.081	H-15123	H-15245
	61.999	19.050	20.638	14.288	3.60	1.20	H-15125	H-15245	44.6	50.7	6400	8600	42.5	36.5	55.0	58.0	3.60	1.20	5.7	0.35	1.71	0.94	0.169	0.081	H-15125	H-15245
	61.999	19.050	20.638	14.288	0.80	1.20	H-15126	H-15245	44.6	50.7	6400	8600	37.0	36.5	55.0	58.0	0.80	1.20	5.7	0.35	1.71	0.94	0.171	0.081	H-15126	H-15245
	66.421	25.400	25.357	20.638	0.80	3.20	H-2580	H-2520	71.4	85.1	6000	8000	38.5	37.5	57.0	62.5	0.80	3.20	9.4	0.27	2.19	1.21	0.281	0.123	H-2580	H-2520
	68.263	22.225	22.225	17.463	3.60	1.60	H-02475	H-02420	51.0	61.1	6000	8000	44.5	38.5	59.0	63.0	3.60	1.60	5.1	0.42	1.44	0.79	0.224	0.150	H-02475	H-02420
	68.263	22.225	22.225	17.463	1.60	1.60	H-M88046	H-M88010	56.1	71.1	6000	7900	43.0	40.5	58.0	65.0	1.60	1.60	3.0	0.55	1.10	0.60	0.245	0.144	H-M88046	H-M88010
	69.012	19.845	19.583	15.875	3.60	1.20	H-14125A	H-14276	46.1	55	5900	7800	44.0	37.5	60.0	63.0	3.60	1.20	4.4	0.38	1.57	0.86	0.213	0.134	H-14125A	H-14276
	69.012	19.845	19.583	15.875	3.60	3.20	H-14125A	H-14274	46.1	55	5900	7800	44.0	37.5	59.0	63.0	3.60	3.20	4.4	0.38	1.57	0.86	0.213	0.131	H-14125A	H-14274
33.338	69.850	23.813	25.357	19.050	0.80	1.20	H-2580	H-2523	71.4	85.1	6000	8000	38.5	37.5	61.0	64.0	0.80	1.20	9.4	0.27	2.19	1.21	0.281	0.168	H-2580	H-2523
	68.263	22.225	22.225	17.463	0.80	1.60	H-M88048	H-M88010	56.1	71.1	6000	7900	42.5	41.0	58.0	65.0	0.80	1.60	3.0	0.55	1.10	0.60	0.231	0.144	H-M88048	H-M88010
	69.012	19.845	19.583	15.875	3.60	1.20	H-14130	H-14276	46.1	55.0	5900	7800	45.0	38.5	60.0	63.0	3.60	1.20	4.4	0.38	1.57	0.86	0.2	0.134	H-14130	H-14276
	69.012	19.845	19.583	15.875	0.80	3.20	H-14131	H-14274	46.1	55.0	5900	7800	39.5	38.5	59.0	63.0	0.80	3.20	4.4	0.38	1.57	0.86	0.203	0.131	H-14131	H-14274
	69.012	19.845	19.583	15.875	0.80	1.20	H-14131	H-14276	46.1	55.0	5900	7800	39.5	38.5	60.0	63.0	0.80	1.20	4.4	0.38	1.57	0.86	0.203	0.134	H-14131	H-14276
	69.012	19.845	19.583	15.875	3.60	3.20	H-14130	H-14274	46.1	55.0	5900	7800	45.0	38.5	59.0	63.0	3.60	3.20	4.4	0.38	1.57	0.86	0.2	0.131	H-14130	H-14274
	76.200	23.813	25.654	19.050	1.60	3.20	H-2790R	H-2720	74.1	92.2	5400	7200	42.0	40.0	66.0	70.0	1.60	3.20	8.1	0.30	1.98	1.09	0.364	0.184	H-2790R	H-2720

Notes: (1) Minus value of load center "a" indicates that the center is located outside of cone backface.
(2) SP indicates special surface handling configurations.

Tapered Roller Bearings
Inch Series
Bore Diameter: 34.925~38.100mm



Dynamic equivalent radial load
 $P_r = X F_r + Y F_a$

$\frac{F_a}{F_r} \leq e$		$\frac{F_a}{F_r} > e$	
X	Y	X	Y
1	0	0.4	Y_1

Values e and Y_1 from table.

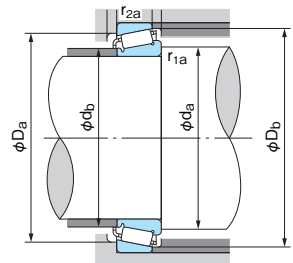
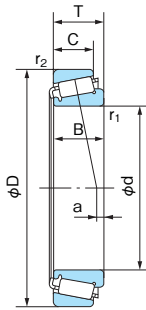
Static equivalent radial load
Larger value of following to be used:
 $P_0 = 0.5 F_r + Y_0 F_a$
 $P_0 = F_r$
Values Y_0 from table.

1N=0.102kgf

Boundary dimensions (mm)							Bearing No.		Basic load rating		Limiting speed (min ⁻¹)			Abutment and fillet dimensions (mm)						Load center (mm) a (°)	Constant e	Axial load factor		Mass(kg) Reference		Bearing No.	
d	D	T	B	C	r ₁ (min)	r ₂ (min)	Cone	Cup	Cr (kN)	Cor (kN)	Grease	Oil		d _a	d _b	D _a	D _b	r _{1a}	r _{2a}			Y ₁	Y ₀	Cone	Cup	Cone	Cup
34.925	65.088	18.034	18.288	13.970	SP	1.20	H-LM48548	H-LM48510	48.0	58.5	6000	8000		46.0	40.0	58.0	61.0	SP	1.20	3.7	0.38	1.59	0.88	0.164	0.086	H-LM48548	H-LM48510
	65.088	21.082	18.288	17.018	SP	1.60	H-LM48548	H-LM48511A	48.0	58.5	6000	8000		46.0	40.0	58.0	61.0	SP	1.60	3.7	0.38	1.59	0.88	0.164	0.113	H-LM48548	H-LM48511A
	65.088	18.034	18.288	13.970	0.80	1.20	H-LM48548A	H-LM48510	48.0	58.5	6000	8000		40.5	42.0	58.0	61.0	0.80	1.20	3.7	0.38	1.59	0.88	0.169	0.086	H-LM48548A	H-LM48510
	65.088	21.082	18.288	17.018	0.80	1.60	H-LM48548A	H-LM48511A	48.0	58.5	6000	8000		40.5	42.0	58.0	61.0	0.80	1.60	3.7	0.38	1.59	0.88	0.169	0.113	H-LM48548A	H-LM48511A
	69.012	19.845	19.583	15.875	1.60	3.20	H-14137A	H-14274	46.1	55.0	5900	7800		42.0	40.0	59.0	63.0	1.60	3.20	4.4	0.38	1.57	0.86	0.189	0.131	H-14137A	H-14274
	69.012	19.845	19.583	15.875	1.60	1.20	H-14137A	H-14276	46.1	55.0	5900	7800		42.0	40.0	60.0	63.0	1.60	1.20	4.4	0.38	1.57	0.86	0.189	0.134	H-14137A	H-14276
	69.012	19.845	19.583	15.875	3.60	3.20	H-14138A	H-14274	46.1	55.0	5900	7800		46.0	40.0	59.0	63.0	3.60	3.20	4.4	0.38	1.57	0.86	0.187	0.131	H-14138A	H-14274
	69.012	19.845	19.583	15.875	3.60	1.20	H-14138A	H-14276	46.1	55.0	5900	7800		46.0	40.0	60.0	63.0	3.60	1.20	4.4	0.38	1.57	0.86	0.187	0.134	H-14138A	H-14276
	72.233	25.400	25.400	19.842	2.40	2.40	H-HM88649	H-HM88610	66.9	87.4	5700	7600		48.5	42.5	60.0	69.0	2.40	2.40	4.7	0.55	1.10	0.60	0.301	0.185	H-HM88649	H-HM88610
	73.025	23.813	24.608	19.050	1.60	2.40	H-25877R	H-25820	72.2	87.3	5600	7400		43.0	40.5	64.0	68.0	1.60	2.40	8.2	0.29	2.07	1.14	0.31	0.164	H-25877R	H-25820
	73.025	23.813	24.608	19.050	1.60	0.80	H-25877R	H-25821	72.2	87.3	5600	7400		43.0	40.5	65.0	68.0	1.60	0.80	8.2	0.29	2.07	1.14	0.31	0.165	H-25877R	H-25821
	76.200	29.370	28.575	23.813	3.60	3.30	H-31593	H-31520	80.9	97.4	5400	7200		50.0	43.5	64.0	72.0	3.60	3.30	7.8	0.40	1.49	0.82	0.388	0.232	H-31593	H-31520
	76.200	29.370	28.575	23.813	1.60	3.30	H-31594	H-31520	80.9	97.4	5400	7200		46.0	43.5	64.0	72.0	1.60	3.30	7.8	0.40	1.49	0.82	0.388	0.232	H-31594	H-31520
	79.375	29.370	29.771	23.813	3.60	3.20	3478	3420	87.4	105	5200	6900		50.0	43.5	67.0	74.0	3.60	3.20	8.6	0.37	1.64	0.90	0.462	0.256	3478	3420
	80.167	29.370	30.391	23.813	3.60	3.20	3379	3320	91	106	5000	6700		48.0	41.5	70.0	75.0	3.60	3.20	10.7	0.27	2.20	1.21	0.505	0.217	3379	3320
	85.725	30.162	30.162	23.813	3.60	3.20	3872	3820	108	136	4800	6400		53.0	46.0	73.0	81.0	3.60	3.20	8.4	0.40	1.49	0.82	0.614	0.285	3872	3820
34.987	59.131	15.875	16.764	11.938	SP	1.27	H-L68149	H-L68110	35.7	48.5	6400	8500		45.5	39.0	53.0	56.0	SP	1.27	2.7	0.42	1.44	0.79	0.112	0.056	H-L68149	H-L68110
	59.975	15.875	16.764	11.938	SP	1.20	H-L68149	H-L68111	35.7	48.5	6400	8500		45.5	39.0	53.0	56.0	SP	1.20	2.7	0.42	1.44	0.79	0.112	0.063	H-L68149	H-L68111
36.487	73.025	23.813	24.608	19.050	1.60	2.40	H-25880R	H-25820	72.2	87.3	5600	7400		44.0	42.0	64.0	68.0	1.60	2.40	8.2	0.29	2.07	1.14	0.294	0.164	H-25880R	H-25820
	73.025	23.813	24.608	19.050	1.60	0.80	H-25880R	H-25821	72.2	87.3	5600	7400		44.0	42.0	65.0	68.0	1.60	0.80	8.2	0.29	2.07	1.14	0.294	0.165	H-25880R	H-25821
	76.200	23.813	25.654	19.050	1.60	3.20	H-2780R	H-2720	74.1	92.2	5400	7200		44.5	42.5	66.0	70.0	1.60	3.20	8.1	0.30	1.98	1.09	0.33	0.185	H-2780R	H-2720
36.513	76.200	29.370	28.575	23.813	3.60	3.30	H-31597	H-31520	80.9	97.4	5400	7200		51.0	44.5	64.0	72.0	3.60	3.30	7.8	0.40	1.49	0.82	0.368	0.232	H-31597	H-31520
	93.663	31.750	31.750	26.195	1.60	3.20	46143	46368	105	134	4400	5800		48.5	46.5	79.0	87.0	1.60	3.20	7.7	0.40	1.49	0.82	0.738	0.403	46143	46368
38.000	63.000	17.000	17.000	13.500	SP	SP	H-JL69349	H-JL69310	43.5	58.2	6000	8000		49.0	41.0	60.0	56.5	SP	SP	2.4	0.42	1.44	0.79	0.128	0.070	H-JL69349	H-JL69310
	65.088	18.034	18.288	13.970	SP	1.17	H-LM29748	H-LM29710	42.9	56.5	5800	7800		49.0	42.5	59.0	62.0	SP	1.17	4.3	0.33	1.80	0.99	0.154	0.079	H-LM29748	H-LM29710
	65.088	18.034	18.288	13.970	2.36	1.17	H-LM29749	H-LM29710	42.9	56.5	5800	7800		46.0	42.5	59.0	62.0	2.36	1.17	4.3	0.33	1.80	0.99	0.159	0.079	H-LM29749	H-LM29710
	65.088	19.812	18.288	15.748	2.36	1.30	H-LM29749	H-LM29711	42.9	56.5	5800	7800		46.0	42.5	58.0	62.0	2.36	1.30	4.3	0.33	1.80	0.99	0.159	0.092	H-LM29749	H-LM29711
	68.275	20.000	16.520	16.032	1.60	1.60	H-19150R	H-19268X	46.1	53.8	5700	7600		45.0	43.0	61.0	65.0	1.60	1.60	1.4	0.44	1.35	0.74	0.167	0.109	H-19150R	H-19268X
	69.012	26.195	26.195	15.083	1.60	2.40	H-13686	H-13621	49.2	62	5600	7500		46.0	43.0	61.0	65.0	1.60	2.40	10.1	0.40	1.49	0.82	0.254	0.102	H-13686	H-13621
	76.200	23.813	25.654	19.050	3.60	3.20	H-2788R	H-2720	74.1	92.2	5400	7200		50.0	43.5	66.0	70.0	3.60	3.20	8.1	0.30	1.98	1.09	0.308	0.185	H-2788R	H-2720
	79.375	23.813	25.400	19.050	0.80	0.80	H-26878R.	H-26822.	81.1	105	5000	6700		45.0	44.5	71.0	74.0	0.80	0.80	7.5	0.32	1.88	1.04	0.397	0.185	H-26878R.	H-26822.
	79.375	29.370	29.771	23.813	3.60	3.20	3490	3420	87.4	105	5200	6900		52.0	45.9	67.0	74.0	3.60	3.20	8.6	0.37	1.64	0.90	0.421	0.256	3490	3420
	80.167	25.400	25.400	20.638	0.80	3.20	H-26878R.	H-26820.	81.1	105	5000	6700		45.0	44.5	69.0	74.0	0.80	3.20	7.5	0.32	1.88	1.04	0.397	0.217	H-26878R.	H-26820.
	88.501	26.988	29.083	22.225	3.60	1.60	418	414	98.2	112	4900	6500		51.0	44.5	77.0	80.0	3.60	1.60	10.1	0.26	2.28	1.25	0.523	0.325	418	414

Notes: (1) Minus value of load center "a" indicates that the center is located outside of cone backface.
(2) SP indicates special surface handling configurations.

Tapered Roller Bearings
Inch Series
Bore Diameter: 39.688~42.875mm



Dynamic equivalent radial load
 $P_r = X F_r + Y F_a$

$\frac{F_a}{F_r} \leq e$		$\frac{F_a}{F_r} > e$	
X	Y	X	Y
1	0	0.4	Y_1

Values e and Y_1 from table.

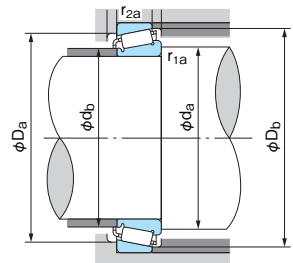
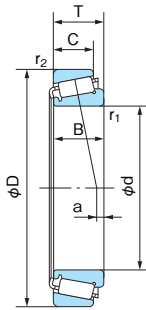
Static equivalent radial load
Larger value of following to be used:
 $P_0 = 0.5 F_r + Y_0 F_a$
 $P_0 = F_r$
Values Y_0 from table.

1N=0.102kgf

Boundary dimensions (mm)							Bearing No.		Basic load rating		Limiting speed (min ⁻¹)		Abutment and fillet dimensions (mm)						Load center (mm) a (1)	Constant e	Axial load factor		Mass(kg) Reference		Bearing No.	
d	D	T	B	C	r ₁ (min)	r ₂ (min)	Cone	Cup	Cr (kN)	Cor (kN)	Grease	Oil	d _a	d _b	D _a	D _b	r _{1a}	r _{2a}			Y ₁	Y ₀	Cone	Cup	Cone	Cup
39.688	73.025	25.654	22.098	21.336	0.80	2.40	H-M201047R	H-M201011	68.4	90.6	5300	7100	48.0	45.5	64.0	69.0	0.80	2.40	5.8	0.33	1.80	0.99	0.278	0.167	H-M201047R	H-M201011
	76.200	23.813	25.654	19.050	3.60	3.20	H-2789R	H-2720	74.1	92.2	5400	7200	52.0	45.0	66.0	70.0	3.60	3.20	8.1	0.30	1.98	1.09	0.289	0.185	H-2789R	H-2720
	76.200	23.813	25.654	19.050	3.60	0.80	H-2789R	H-2729	74.1	92.2	5400	7200	52.0	45.0	68.0	70.0	3.60	0.80	8.1	0.30	1.98	1.09	0.289	0.189	H-2789R	H-2729
40.000	76.200	20.638	20.940	15.507	1.60	1.20	28158	28300	57.3	65.9	5300	7000	47.5	45.0	68.0	71.0	1.60	1.20	4.5	0.40	1.49	0.82	0.266	0.137	28158	28300
40.987	67.975	17.500	18.000	13.500	SP	1.60	H-LM300849	H-LM300811	44.0	59.5	5500	7400	52.0	45.0	61.0	65.0	SP	1.60	3.6	0.35	1.72	0.95	0.157	0.081	H-LM300849	H-LM300811
41.275	73.025	16.667	17.463	12.700	3.60	1.60	H-18590	H-18520	45.9	55.8	5200	6900	53.0	46.0	66.0	69.0	3.60	1.60	2.2	0.35	1.71	0.94	0.199	0.085	H-18590	H-18520
	73.431	19.558	19.812	14.732	3.60	0.80	H-LM501349	H-LM501310	57.8	73.0	5200	7000	53.0	46.5	67.0	70.0	3.60	0.80	3.5	0.40	1.50	0.83	0.227	0.167	H-LM501349	H-LM501310
	73.431	21.430	19.812	16.604	3.60	0.80	H-LM501349	H-LM501314	57.8	73.0	5200	7000	53.0	46.5	66.0	70.0	3.60	0.80	3.5	0.40	1.50	0.83	0.227	0.126	H-LM501349	H-LM501314
	76.200	18.009	17.384	14.288	1.60	1.60	11162R	11300	51.6	63.3	5200	6900	49.0	46.5	67.0	72.0	1.60	1.60	0.5	0.49	1.23	0.68	0.221	0.127	11162R	11300
	76.200	22.225	23.020	17.463	3.60	0.80	24780R	24720	66.3	83.3	5200	6900	54.0	47.0	68.0	72.0	3.60	0.80	4.8	0.39	1.53	0.84	0.275	0.148	24780R	24720
	76.200	25.400	23.020	20.638	3.60	2.40	24780R	24721	66.3	83.3	5200	6900	54.0	47.0	72.0	66.0	3.60	2.40	4.8	0.39	1.53	0.84	0.275	0.186	24780R	24721
	79.375	23.813	25.400	19.050	3.60	0.80	H-26882R.	H-26822.	81.1	105	5000	6700	54.0	47.0	71.0	74.0	3.60	0.80	7.5	0.32	1.88	1.04	0.355	0.186	H-26882R.	H-26822.
	80.167	25.400	25.400	20.638	3.60	3.20	H-26882R.	H-26820.	81.1	105	5000	6700	54.0	47.0	70.0	74.0	3.60	3.20	7.5	0.32	1.88	1.04	0.355	0.217	H-26882R.	H-26820.
	80.167	29.370	30.391	23.813	3.60	3.20	3383	3320	91	106	5000	6700	53.0	46.5	70.0	75.0	3.60	3.20	10.7	0.27	2.20	1.21	0.419	0.217	3383	3320
	80.167	29.370	30.391	23.813	0.80	3.20	3384	3320	91	106	5000	6700	47.0	46.5	70.0	75.0	0.80	3.20	10.7	0.27	2.20	1.21	0.421	0.217	3384	3320
	82.550	26.543	25.654	20.193	3.60	3.30	H-M802048	H-M802011	83.7	105	4900	6500	57.0	50.6	70.0	79.0	3.60	3.30	3.3	0.55	1.10	0.60	0.403	0.227	H-M802048	H-M802011
	84.138	30.163	30.886	23.813	3.60	3.20	3577R	3520	95.8	120	4600	6200	54.0	48.0	74.0	79.5	3.60	3.20	9.7	0.31	1.96	1.08	0.532	0.221	3577R	3520
	85.725	30.162	30.162	23.812	3.60	3.20	3877	3820	108	136	4800	6400	57.0	50.3	73.0	81.0	3.60	3.20	8.4	0.40	1.49	0.82	0.525	0.285	3877	3820
	87.313	30.163	30.886	23.813	3.60	3.20	3577R	3525	95.8	120	4600	6200	54.0	48.0	75.0	81.0	3.60	3.20	9.7	0.31	1.96	1.08	0.532	0.3	3577R	3525
	87.313	30.163	30.886	23.813	1.60	3.20	H-3585R	H-3525	95.8	120	4600	6200	50.0	48.0	75.0	81.0	1.60	3.20	9.7	0.31	1.96	1.08	0.537	0.3	H-3585R	H-3525
	88.900	30.163	29.370	23.020	0.80	3.30	HM803145	HM803110	99.6	125	4600	6100	54.0	53.0	74.0	85.0	0.80	3.30	4.1	0.55	1.10	0.60	0.577	0.318	HM803145	HM803110
	88.900	30.163	29.370	23.020	3.60	3.30	HM803146	HM803110	99.6	125	4600	6100	60.0	53.0	74.0	85.0	3.60	3.30	4.1	0.55	1.10	0.60	0.574	0.318	HM803146	HM803110
	90.488	39.688	40.386	33.338	3.60	3.20	4388	4335	132	169	4500	6000	57.0	51.0	77.0	85.0	3.60	3.20	14.1	0.28	2.11	1.16	0.775	0.454	4388	4335
42.863	87.313	30.163	30.886	23.813	3.60	3.20	H-3579R	H-3525	95.8	120	4600	6200	56.0	49.5	75.0	81.0	3.60	3.20	9.7	0.31	1.96	1.08	0.507	0.3	H-3579R	H-3525
42.875	82.931	26.988	25.400	22.225	3.60	2.40	H-25577	H-25523	77.3	100	4800	6300	55.0	49.0	77.0	72.0	3.60	2.40	6.3	0.33	1.79	0.99	0.383	0.246	H-25577	H-25523
	83.058	23.876	25.400	19.114	3.60	2.00	H-25577	H-25522	77.3	100	4800	6300	55.0	49.0	73.0	77.0	3.60	2.00	6.3	0.33	1.79	0.99	0.383	0.203	H-25577	H-25522

Notes: (1) Minus value of load center "a" indicates that the center is located outside of cone backface.
(2) SP indicates special surface handling configurations.

Tapered Roller Bearings
Inch Series
Bore Diameter: 44.450~45.618mm



Dynamic equivalent radial load
 $P_r = XFr + YFa$

$\frac{Fa}{Fr} \leq e$		$\frac{Fa}{Fr} > e$	
X	Y	X	Y
1	0	0.4	Y_1

Values e and Y_1 from table.

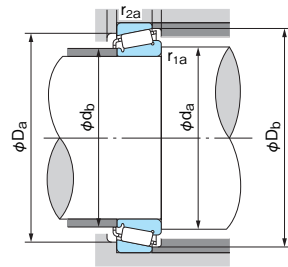
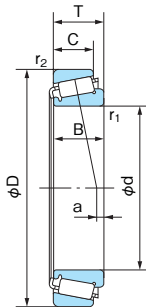
Static equivalent radial load
Larger value of following to be used:
 $P_{0r} = 0.5Fr + Y_0Fa$
 $P_{0r} = Fr$
Values Y_0 from table.

1N=0.102kgf

Boundary dimensions (mm)								Bearing No.		Basic load rating		Limiting speed (min ⁻¹)		Abutment and fillet dimensions (mm)						Load center (mm)	Constant	Axial load factor		Mass(kg) Reference		Bearing No.	
d	D	T	B	C	r ₁ (min)	r ₂ (min)		Cone	Cup	Cr (kN)	Cor (kN)	Grease	Oil	d _a	d _b	D _a	D _b	r _{1a}	r _{2a}	a (°)	e	Y ₁	Y ₀	Cone	Cup	Cone	Cup
44.450	82.931	23.813	25.400	19.050	3.60	0.80		H-25580	H-25520	77.3	100	4800	6300	57.0	55.0	74.0	77.0	3.60	0.80	6.3	0.33	1.79	0.99	0.362	0.2	H-25580	H-25520
	82.931	23.813	25.400	19.050	0.50	0.80		H-25581	H-25520	77.3	100	4800	6300	51.0	50.0	74.0	77.0	0.50	0.80	6.3	0.33	1.79	0.99	0.365	0.2	H-25581	H-25520
	83.058	23.876	25.400	19.114	3.60	2.00		H-25580	H-25522	77.3	100	4800	6300	57.0	50.0	73.0	77.0	3.60	2.00	6.3	0.33	1.79	0.99	0.362	0.203	H-25580	H-25522
	84.138	30.163	30.886	23.813	3.60	3.20		3578R	3520	95.8	120	4600	6200	57.0	51.0	74.0	79.5	3.60	3.20	9.7	0.31	1.96	1.08	0.479	0.221	3578R	3520
	85.001	20.638	21.692	17.463	3.60	1.30		355X	354A	71.8	81.7	4600	6200	56.0	50.0	77.0	80.0	3.60	1.30	5.1	0.31	1.96	1.08	0.342	0.16	355X	354A
	87.313	30.163	30.886	23.813	3.60	3.20		H-3578R	H-3525	95.8	120	4600	6200	57.0	51.0	75.0	81.0	3.60	3.20	9.7	0.31	1.96	1.08	0.483	0.3	H-3578R	H-3525
	88.900	30.163	29.370	23.020	3.60	3.20		HM803149	HM803110	99.6	125	4600	6100	62.0	53.4	74.0	85.0	3.60	3.20	4.1	0.55	1.10	0.60	0.525	0.318	HM803149	HM803110
	90.119	23.000	21.692	21.808	3.60	2.40		355X	352	71.8	81.7	4600	6200	56.0	50.0	82.0	78.0	3.60	2.40	5.1	0.31	1.96	1.08	0.342	0.318	355X	352
	92.075	30.163	29.370	23.020	3.60	3.20		HM803149	HM803112	99.6	125	4600	6100	62.0	53.4	75.0	85.0	3.60	3.20	4.1	0.55	1.10	0.60	0.525	0.398	HM803149	HM803112
	93.264	30.163	30.302	23.813	3.60	3.20		3782	3720	103	137	4200	5500	58.0	52.0	82.0	88.0	3.60	3.20	8.0	0.34	1.77	0.97	0.658	0.288	3782	3720
	95.250	30.958	28.301	20.638	1.20	0.80		53176	53375	88.7	98.4	3700	5200	59.0	52.5	81.0	89.0	1.20	0.80	1.0	0.74	0.81	0.45	0.562	0.363	53176	53375
	95.250	30.958	28.301	20.638	3.60	0.80		53177	53375	88.7	98.4	3700	5200	63.0	52.5	81.0	89.0	3.60	0.80	1.0	0.74	0.81	0.45	0.557	0.363	53177	53375
	95.250	27.783	28.575	22.225	0.80	0.80		33885	33822	108	141	4100	5400	53.0	53.0	86.0	90.0	0.80	0.80	7.4	0.33	1.82	1.00	0.714	0.267	33885	33822
	95.250	30.958	28.575	22.225	3.60	0.80		HM903249	HM903210	99.7	120	3700	5100	65.0	54.0	81.0	91.0	3.60	0.80	0.1	0.74	0.81	0.45	0.613	0.383	HM903249	HM903210
	95.250	30.163	29.370	23.020	3.60	3.20		HM804843	HM804810	104	140	3300	4400	63.0	57.0	81.0	91.0	3.60	3.20	3.7	0.55	1.10	0.60	0.67	0.351	HM804843	HM804810
	104.775	30.163	30.958	23.813	0.80	3.20		45280	45220	126	165	3700	4900	55.0	54.0	93.0	99.0	0.80	3.20	8.0	0.33	1.80	0.99	1	0.345	45280	45220
	104.775	36.513	36.513	28.575	3.60	3.20		HM807040	HM807010	141	195	3800	5100	66.0	59.0	89.0	100.0	3.60	3.20	7.2	0.49	1.23	0.68	1.13	0.497	HM807040	HM807010
	111.125	30.163	26.909	20.638	3.60	3.20		55175CR	55437	111	150	3100	4300	67.0	60.0	92.0	105.0	3.60	3.20	(7.2)	0.88	0.68	0.37	0.938	0.507	55175CR	55437
	114.300	44.450	44.450	34.925	3.60	3.20		65385	65320	189	230	3800	5000	65.0	59.0	97.0	107.0	3.60	3.20	12.5	0.43	1.40	0.77	1.48	0.869	65385	65320
44.983	82.931	23.813	25.400	19.050	1.60	0.80		H-25584	H-25520	77.3	100	4800	6300	53.0	51.0	74.0	77.0	1.60	0.80	6.3	0.33	1.79	0.99	0.357	0.2	H-25584	H-25520
	83.058	23.813	25.400	19.050	1.60	3.20		H-25584	H-25521	77.3	100	4800	6300	53.0	51.0	72.0	77.0	1.60	3.20	6.3	0.33	1.79	0.99	0.357	0.2	H-25584	H-25521
	83.058	23.876	25.400	19.114	1.60	2.00		H-25584	H-25522	77.3	100	4800	6300	53.0	51.0	73.0	77.0	1.60	2.00	6.3	0.33	1.79	0.99	0.357	0.203	H-25584	H-25522
	93.264	30.163	30.302	23.813	3.60	3.20		3776	3720	103	137	4200	5500	59.0	53.0	82.0	88.0	3.60	3.20	8.0	0.34	1.77	0.97	0.650	0.228	3776	3720
45.230	79.985	19.842	20.638	15.080	2.00	1.20		H-17887	H-17831	55.1	70.8	4800	6400	57.0	52.0	68.0	74.0	2.00	1.20	4.0	0.37	1.64	0.90	0.275	0.134	H-17887	H-17831
45.237	84.138	30.163	30.886	23.813	3.60	3.20		3586R	3520	95.8	120	4600	6200	58.0	52.0	74.0	79.5	3.60	3.20	9.7	0.31	1.96	1.08	0.467	0.221	3586R	3520
	87.313	30.163	30.886	23.813	3.60	3.20		3586R	3525	95.8	120	4600	6200	58.0	52.0	75.0	81.0	3.60	3.20	9.7	0.31	1.96	1.08	0.467	0.3	3586R	3525
45.242	73.431	19.558	19.812	15.748	3.60	0.80		H-LM102949	H-LM102910	55.6	78.1	5100	6700	56.0	50.0	68.0	70.0	3.60	0.80	4.9	0.31	1.97	1.08	0.209	0.100	H-LM102949	H-LM102910
	77.788	19.842	19.842	15.080	3.60	0.80		H-LM603049	H-LM603011	57.1	73.5	4900	6500	57.0	50.0	71.0	74.0	3.60	0.80	2.3	0.43	1.41	0.77	0.243	0.120	H-LM603049	H-LM603011
	77.788	21.430	19.842	16.667	3.60	0.80		H-LM603049	H-LM603012	57.1	73.5	4900	6500	57.0	50.0	71.0	74.0	3.60	0.80	2.3	0.43	1.41	0.77	0.243	0.138	H-LM603049	H-LM603012
	79.974	19.842	19.842	15.080	3.60	0.80		H-LM603049	H-LM603014	57.1	73.5	4900	6500	57.0	50.0	71.0	74.0	3.60	0.80	2.3	0.43	1.41	0.77	0.243	0.152	H-LM603049	H-LM603014
45.618	82.931	23.813	25.400	19.050	3.60	0.80		H-25590	H-25520	77.3	100	4800	6300	58.0	51.0	74.0	77.0	3.60	0.80	6.3	0.33	1.79	0.99	0.345	0.201	H-25590	H-25520
	82.931	26.988	25.400	22.225	3.60	2.40		H-25590	H-25523	77.3	100	4800	6300	58.0	51.0	72.0	77.0	3.60	2.40	6.3	0.33	1.79	0.99	0.345	0.246	H-25590	H-25523
	83.058	23.876	25.400	19.114	3.60	2.00		H-25590	H-25522	77.3	100	4800	6300	58.0	51.0	73.0	77.0	3.60	2.00	6.3	0.33	1.79	0.99	0.345	0.203	H-25590	H-25522
	83.058	23.813	25.400	19.050	3.60	3.20		H-25590	H-25521	77.3	100	4800	6300	58.0	51.0	72.0	77.0	3.60	3.20	6.3	0.33	1.79	0.99	0.345	0.2	H-25590	H-25521

Note: (°) Minus value of load center "a" indicates that the center is located outside of cone backface.

Tapered Roller Bearings
Inch Series
Bore Diameter: 46.038~51.592mm



Dynamic equivalent radial load

$P_r = X F_r + Y F_a$

$\frac{F_a}{F_r} \leq e$		$\frac{F_a}{F_r} > e$	
X	Y	X	Y
1	0	0.4	Y ₁

Values e and Y₁ from table.

Static equivalent radial load

Larger value of following to be used:

$P_{0r} = 0.5 F_r + Y_0 F_a$

$P_{0r} = F_r$

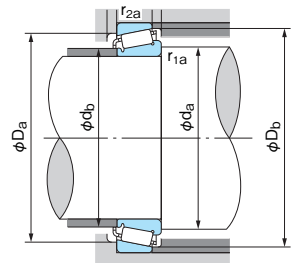
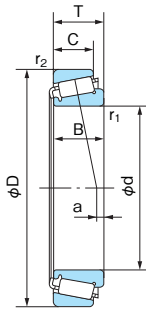
Values Y₀ from table.

1N=0.102kgf

Boundary dimensions (mm)							Bearing No.		Basic load rating		Limiting speed (min ⁻¹)		Abutment and fillet dimensions (mm)						Load center (mm) a (1)	Constant ^e	Axial load factor		Mass(kg) Reference		Bearing No.	
d	D	T	B	C	r ₁ (min)	r ₂ (min)	Cone	Cup	Cr (kN)	Cor (kN)	Grease	Oil	d _a	d _b	D _a	D _b	r _{1a}	r _{2a}			Y ₁	Y ₀	Cone	Cup	Cone	Cup
46.038	79.375	17.463	17.463	13.495	2.80	1.60	18690	18620	47.1	59.1	4800	6400	56.0	51.0	71.0	74.0	2.80	1.60	1.5	0.37	1.60	0.88	0.208	0.123	18690	18620
	85.001	20.638	21.692	17.463	2.40	1.30	359S	354A	71.8	81.7	4600	6200	55.0	51.0	77.0	80.0	2.40	1.30	5.1	0.31	1.96	1.08	0.323	0.160	359S	354A
47.625	88.900	20.638	22.225	16.513	2.40	1.30	369S	362A	74.3	87.3	4400	5800	57.0	53.0	81.0	84.0	2.40	1.30	4.6	0.32	1.88	1.03	0.375	0.164	369S	362A
	88.900	25.400	25.400	19.050	3.60	3.20	M804049	M804010	87.1	112	4400	5900	62.0	55.0	76.0	85.0	3.60	3.20	2.1	0.55	1.10	0.60	0.450	0.216	M804049	M804010
	90.000	20.000	22.225	15.875	3.60	2.00	369A	362	74.3	87.3	4400	5800	60.0	53.0	81.0	84.0	3.60	2.00	4.6	0.32	1.88	1.03	0.373	0.173	369A	362
	93.264	30.163	30.302	23.813	3.60	3.20	3779	3720	103	137	4200	5500	61.0	55.0	82.0	88.0	3.60	3.20	8.0	0.34	1.77	0.97	0.606	0.288	3779	3720
	95.250	30.163	29.370	23.020	3.60	3.20	HM804846	HM804810	104	140	3300	4400	64.0	57.0	81.0	91.0	3.60	3.20	3.6	0.55	1.10	0.60	0.617	0.351	HM804846	HM804810
	107.950	36.513	36.957	28.575	3.60	3.20	536	532X	138	172	3800	5100	62.0	56.0	94.0	100.0	3.60	3.20	12.3	0.30	2.03	1.11	1.04	0.569	536	532X
48.412	95.250	30.163	29.370	23.020	2.40	3.20	HM804848	HM804810	104	140	3300	4400	63.0	57.5	81.0	91.0	2.40	3.20	3.7	0.55	1.10	0.60	0.606	0.351	HM804848	HM804810
49.213	104.775	36.513	36.513	28.575	3.60	3.20	HM807044	HM807010	141	195	3800	5100	69.0	63.0	89.0	100.0	3.60	3.20	7.2	0.49	1.23	0.68	1.03	0.497	HM807044	HM807010
50.000	82.000	21.500	21.500	17.000	3.00	0.50	H-JLM104948	H-JLM104910	71.7	97.9	4500	6000	60.0	55.0	76.0	78.0	3.00	0.50	5.3	0.31	1.97	1.08	0.304	0.128	H-JLM104948	H-JLM104910
	84.000	22.000	22.000	17.500	3.50	1.50	H-JLM704649	H-JLM704610	70.2	96.2	4500	6000	62.0	56.0	76.0	80.0	3.50	1.50	2.5	0.44	1.37	0.75	0.324	0.161	H-JLM704649	H-JLM704610
	90.000	28.000	28.000	23.000	3.00	2.50	JM205149	JM205110	105	138	4300	5800	62.0	57.0	80.0	85.0	3.00	2.50	7.8	0.33	1.82	1.00	0.508	0.243	JM205149	JM205110
	105.000	37.000	36.000	29.000	3.00	2.50	JHM807045E	JHM807012E	149	205	3800	5100	69.0	63.0	90.0	100.0	3.00	2.50	7.6	0.49	1.23	0.68	1.01	0.523	JHM807045E	JHM807012E
50.800	82.550	21.590	22.225	16.510	3.60	1.20	H-LM104949	H-LM104911	61.2	84.3	4500	6000	62.0	55.0	75.0	78.0	3.60	1.20	5.2	0.31	1.97	1.08	0.287	0.131	H-LM104949	H-LM104911
	82.931	21.590	22.225	16.510	3.60	1.20	H-LM104949	H-LM104912	61.2	84.3	4500	6000	62.0	55.0	75.0	78.0	3.60	1.20	5.2	0.31	1.97	1.08	0.287	0.138	H-LM104949	H-LM104912
	85.001	17.463	17.463	13.495	3.60	1.60	18790	18720	49.7	65.5	4400	5900	62.0	56.0	77.0	80.0	3.60	1.60	0.1	0.41	1.48	0.81	0.227	0.133	18790	18720
	88.900	20.638	22.225	16.513	3.60	1.30	368A	362A	74.3	87.3	4400	5800	62.0	56.0	81.0	84.0	3.60	1.30	4.6	0.32	1.88	1.03	0.331	0.164	368A	362A
	89.980	24.750	25.400	19.987	3.60	2.40	28580R	28520	84.8	119	4200	5600	63.0	57.0	81.0	86.0	3.60	2.40	4.7	0.38	1.59	0.87	0.458	0.198	28580R	28520
	90.000	20.000	22.225	15.875	3.60	2.00	368A	362	74.3	87.3	4400	5800	62.0	56.0	81.0	84.0	3.60	2.00	4.6	0.32	1.88	1.03	0.331	0.173	368A	362
	92.075	24.608	25.400	19.845	3.60	0.80	28580R.	28521	84.8	119	4200	5600	63.0	57.0	83.0	87.0	3.60	0.80	4.7	0.38	1.59	0.87	0.453	0.247	28580R.	28521
	93.264	30.163	30.302	23.813	0.80	3.20	3775	3720	103	137	4200	5500	58.0	58.0	82.0	88.0	0.80	3.20	8.0	0.34	1.77	0.97	0.551	0.288	3775	3720
	93.264	30.163	30.302	23.813	3.60	3.20	3780	3720	103	137	4200	5500	64.0	58.0	82.0	88.0	3.60	3.20	8.0	0.34	1.77	0.97	0.547	0.288	3780	3720
	95.250	27.783	28.575	22.225	3.60	2.40	33889	33821	108	141	4100	5400	64.0	58.0	85.0	90.0	3.60	2.40	7.4	0.33	1.82	1.00	0.604	0.264	33889	33821
	95.250	27.783	28.575	22.225	3.60	0.80	33889	33822	108	141	4100	5400	64.0	58.0	86.0	90.0	3.60	0.80	7.4	0.33	1.82	1.00	0.604	0.267	33889	33822
	97.630	24.608	24.608	19.446	3.60	0.80	28678	28622	89.6	131	3900	5200	65.0	58.0	88.0	92.0	3.60	0.80	3.4	0.40	1.49	0.82	0.569	0.267	28678	28622
	101.600	31.750	31.750	25.400	3.60	3.20	49585	49520	114	143	3900	5200	66.0	59.0	88.0	96.0	3.60	3.20	7.8	0.40	1.50	0.82	0.736	0.384	49585	49520
	101.600	34.925	36.068	26.988	0.80	3.20	529	522	131	159	4000	5300	59.0	58.0	89.0	95.0	0.80	3.20	12.7	0.29	2.10	1.16	0.806	0.411	529	522
	101.600	34.925	36.068	26.988	3.60	3.20	529X	522	131	159	4000	5300	65.0	58.0	89.0	95.0	3.60	3.20	12.7	0.29	2.10	1.16	0.802	0.411	529X	522
	104.775	30.163	30.958	23.813	6.40	3.20	45284	45220	126	165	3700	4900	71.0	59.0	93.0	99.0	6.40	3.20	8.0	0.33	1.80	0.99	0.873	0.345	45284	45220
	104.775	36.513	36.513	28.575	3.60	3.20	HM807046	HM807010	141	195	3800	5100	70.0	63.0	89.0	100.0	3.60	3.20	7.2	0.49	1.23	0.68	0.995	0.497	HM807046	HM807010
	107.950	36.513	36.957	28.575	3.60	3.20	537	532X	138	172	3800	5100	65.0	59.0	94.0	100.0	3.60	3.20	12.3	0.30	2.03	1.11	0.969	0.569	537	532X
51.592	90.000	20.000	22.225	15.875	2.00	2.00	368S	362	74.3	87.3	4400	5800	59.0	56.0	81.0	84.0	2.00	2.00	4.6	0.32	1.88	1.03	0.322	0.173	368S	362

Note: (1) Minus value of load center "a" indicates that the center is located outside of cone backface.

Tapered Roller Bearings
Inch Series
Bore Diameter: 52.388~55.563mm



Dynamic equivalent radial load
 $P_r = X F_r + Y F_a$

$\frac{F_a}{F_r} \leq e$		$\frac{F_a}{F_r} > e$	
X	Y	X	Y
1	0	0.4	Y_1

Values e and Y_1 from table.

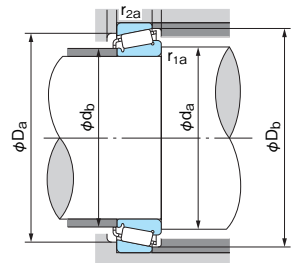
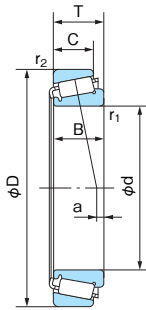
Static equivalent radial load
Larger value of following to be used:
 $P_{0r} = 0.5 F_r + Y_0 F_a$
 $P_{0r} = F_r$
Values Y_0 from table.

1N=0.102kgf

Boundary dimensions (mm)							Bearing No.		Basic load rating		Limiting speed (min ⁻¹)			Abutment and fillet dimensions (mm)						Load center (mm) a (1)	Constant e	Axial load factor		Mass(kg) Reference		Bearing No.	
d	D	T	B	C	r ₁ (min)	r ₂ (min)	Cone	Cup	Cr (kN)	Cor (kN)	Grease	Oil		d _a	d _b	D _a	D _b	r _{1a}	r _{2a}			Y ₁	Y ₀	Cone	Cup	Cone	Cup
52.388	92.075	24.608	25.400	19.845	3.60	0.80	28584R.	28521	84.8	119	4200	5600		65.0	58.0	83.0	87.0	3.60	0.80	4.7	0.38	1.59	0.87	0.435	0.247	28584R.	28521
	93.264	30.163	30.302	23.813	2.40	3.20	3767	3720	103	137	4200	5500		63.0	59.0	82.0	88.0	2.40	3.20	8.0	0.34	1.77	0.97	0.519	0.288	3767	3720
	95.250	27.783	28.575	22.225	1.60	2.40	33890	33821	108	141	4100	5400		61.0	59.0	85.0	90.0	1.60	2.40	7.4	0.33	1.82	1.00	0.581	0.264	33890	33821
	95.250	27.783	28.575	22.225	3.60	2.40	33891	33821	108	141	4100	5400		66.0	59.0	85.0	90.0	3.60	2.40	7.4	0.33	1.82	1.00	0.578	0.264	33891	33821
53.975	95.250	27.783	28.575	22.225	1.60	2.40	33895	33821	108	141	4100	5400		63.0	60.0	85.0	90.0	1.60	2.40	7.4	0.33	1.82	1.00	0.551	0.264	33895	33821
	95.250	27.783	28.575	22.225	1.60	0.80	33895	33822	108	141	4100	5400		63.0	60.0	86.0	90.0	1.60	0.80	7.4	0.33	1.82	1.00	0.551	0.267	33895	33822
	96.838	21.001	21.946	15.875	1.60	0.80	389AS	382A	80.4	101	3900	5200		62.0	60.0	89.0	92.0	1.60	0.80	3.6	0.35	1.69	0.93	0.479	0.177	389AS	382A
	98.425	21.001	21.946	17.826	0.80	0.80	389A	382	80.4	101	3900	5200		61.0	60.0	89.0	92.0	0.80	0.80	3.6	0.35	1.69	0.93	0.478	0.223	389A	382
	107.950	36.513	36.957	28.575	3.60	3.20	539	532X	138	172	3800	5100		68.0	61.0	94.0	100.0	3.60	3.20	12.3	0.30	2.03	1.11	0.894	0.569	539	532X
	123.825	38.100	36.678	30.163	3.60	3.20	557S	552A	162	223	3200	4200		71.0	65.0	109.0	116.0	3.60	3.20	9.4	0.35	1.73	0.95	1.47	0.756	557S	552A
54.991	135.755	53.975	56.007	44.450	3.60	3.20	6381	6320	266	357	3000	4000		76.0	70.0	117.0	126.0	3.60	3.20	19.2	0.32	1.85	1.02	2.75	1.37	6381	6320
55.000	90.000	23.000	23.000	18.500	1.60	0.50	JLM506849E	JLM506810E	81.4	115	4200	5500		63.0	61.0	82.0	86.0	1.60	0.50	2.9	0.40	1.49	0.82	0.370	0.183	JLM506849E	JLM506810E
	95.000	29.000	29.000	23.500	1.50	2.50	JM207049	JM207010	110	150	4000	5300		64.0	62.0	85.0	91.0	1.50	2.50	7.7	0.33	1.79	0.99	0.567	0.256	JM207049	JM207010
	95.000	29.000	29.000	23.500	6.00	2.50	JM207049A	JM207010	110	150	4000	5300		73.0	62.0	85.0	91.0	6.00	2.50	7.7	0.33	1.79	0.99	0.558	0.256	JM207049A	JM207010
	110.000	39.000	39.000	32.000	3.00	2.50	JH307749E	JH307710E	176	224	3600	4900		71.0	64.0	97.0	104.0	3.00	2.50	11.9	0.35	1.73	0.95	1.16	0.56	JH307749E	JH307710E
55.563	97.630	24.608	24.608	19.446	3.60	0.80	28680	28622	89.6	131	3900	5200		68.0	62.0	88.0	92.0	3.60	0.80	3.4	0.40	1.49	0.82	0.492	0.267	28680	28622

Note: (1) Minus value of load center "a" indicates that the center is located outside of cone backface.

Tapered Roller Bearings
Inch Series
Bore Diameter: 57.150~61.913mm



Dynamic equivalent radial load
 $P_r = X F_r + Y F_a$

$\frac{F_a}{F_r} \leq e$		$\frac{F_a}{F_r} > e$	
X	Y	X	Y
1	0	0.4	Y_1

Values e and Y_1 from table.

Static equivalent radial load
Larger value of following to be used:
 $P_0 = 0.5 F_r + Y_0 F_a$
 $P_0 = F_r$
Values Y_0 from table.

1N=0.102kgf

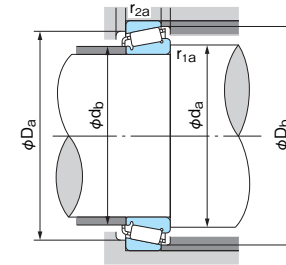
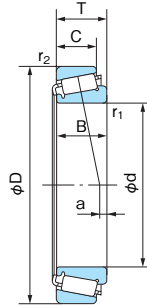
Boundary dimensions (mm)							Bearing No.		Basic load rating		Limiting speed (min ⁻¹)		Abutment and fillet dimensions (mm)						Load center (mm) a (°)	Constant e	Axial load factor		Mass(kg) Reference		Bearing No.	
d	D	T	B	C	r ₁ (min)	r ₂ (min)	Cone	Cup	Cr (kN)	Cor (kN)	Grease	Oil	d _a	d _b	D _a	D _b	r _{1a}	r _{2a}			Y ₁	Y ₀	Cone	Cup	Cone	Cup
57.150	96.838	21.001	21.946	15.875	2.40	0.80	387	382A	80.4	101	3900	5200	66.0	62.0	89.0	92.0	2.40	0.80	3.6	0.35	1.69	0.93	0.428	0.177	387	382A
	96.838	25.400	21.946	20.274	2.40	2.40	387	382S	80.4	101	3900	5200	66.0	62.0	87.0	91.0	2.40	2.40	3.6	0.35	1.69	0.93	0.428	0.245	387	382S
	96.838	21.001	21.946	15.875	3.60	0.80	387A	382A	80.4	101	3900	5200	69.0	62.0	89.0	92.0	3.60	0.80	3.6	0.35	1.69	0.93	0.426	0.177	387A	382A
	96.838	25.400	21.946	20.274	3.60	2.40	387A	382S	80.4	101	3900	5200	72.0	62.0	87.0	91.0	3.60	2.40	3.6	0.35	1.69	0.93	0.426	0.245	387A	382S
	96.838	21.001	21.946	15.875	5.00	0.80	387AS	382A	80.4	101	3900	5200	72.0	62.0	89.0	92.0	5.00	0.80	3.6	0.35	1.69	0.93	0.422	0.177	387AS	382A
	96.838	25.400	21.946	20.274	5.00	2.40	387AS	382S	80.4	101	3900	5200	72.0	62.0	87.0	91.0	5.00	2.40	3.6	0.35	1.69	0.93	0.422	0.245	387AS	382S
	96.838	24.608	24.608	19.446	3.60	0.80	28682	28621	89.6	131	3900	5200	70.0	63.0	87.0	91.0	3.60	0.80	3.4	0.40	1.49	0.82	0.466	0.248	28682	28621
	97.630	24.608	24.608	19.446	3.60	0.80	28682	28622	89.6	131	3900	5200	70.0	63.0	88.0	92.0	3.60	0.80	3.4	0.40	1.49	0.82	0.466	0.267	28682	28622
	98.425	21.001	21.946	17.826	2.40	0.80	387	382	80.4	101	3900	5200	66.0	62.0	89.0	92.0	2.40	0.80	3.6	0.35	1.69	0.93	0.428	0.223	387	382
	98.425	21.001	21.946	17.826	3.60	0.80	387A	382	80.4	101	3900	5200	69.0	62.0	89.0	92.0	3.60	0.80	3.6	0.35	1.69	0.93	0.426	0.223	387A	382
	104.775	30.163	29.317	24.605	2.40	3.30	462	453X	109	144	3700	4900	67.0	63.0	92.0	98.0	2.40	3.30	6.6	0.34	1.79	0.98	0.685	0.372	462	453X
	104.775	30.163	29.317	24.605	3.60	3.30	469	453X	109	144	3700	4900	70.0	63.0	92.0	98.0	3.60	3.30	6.6	0.34	1.79	0.98	0.682	0.372	469	453X
	104.775	30.163	30.958	23.813	0.80	3.20	45289	45220	126	165	3700	4900	65.0	65.0	93.0	99.0	0.80	3.20	8.0	0.33	1.80	0.99	0.757	0.345	45289	45220
	104.775	30.163	30.958	23.813	2.40	3.20	45290	45220	126	165	3700	4900	68.0	65.0	93.0	99.0	2.40	3.20	8.0	0.33	1.80	0.99	0.755	0.345	45290	45220
	104.775	30.163	30.958	23.813	2.40	0.80	45290	45221	126	165	3700	4900	68.0	65.0	95.0	99.0	2.40	0.80	8.0	0.33	1.80	0.99	0.755	0.35	45290	45221
	110.000	21.999	21.996	18.824	2.40	1.20	390	394A	86.4	116	3400	4500	70.0	66.0	101.0	104.5	2.40	1.20	0.7	0.40	1.49	0.82	0.682	0.259	390	394A
	112.713	30.163	30.163	23.813	3.60	3.20	39580	39520	147	207	3300	4500	72.0	66.0	101.0	107.0	3.60	3.20	6.9	0.34	1.77	0.97	1.05	0.355	39580	39520
	112.713	30.163	30.163	23.813	7.90	3.20	39581	39520	147	207	3300	4500	81.0	66.0	101.0	107.0	7.90	3.20	6.9	0.34	1.77	0.97	1.03	0.355	39581	39520
	117.475	33.338	31.750	23.813	3.60	3.20	66225R	66462	129	152	3500	4600	76.0	69.0	100.0	111.0	3.60	3.20	0.2	0.63	0.96	0.53	1.03	0.547	66225R	66462
	120.650	41.275	41.275	31.750	3.60	3.20	623	612	174	217	3500	4600	72.0	66.0	105.0	110.0	3.60	3.20	14.0	0.31	1.91	1.05	1.27	0.853	623	612
	123.825	38.100	36.678	30.163	3.60	3.20	555S	552A	162	223	3200	4200	73.0	67.0	109.0	116.0	3.60	3.20	9.4	0.35	1.73	0.95	1.4	0.756	555S	552A
57.531	98.425	21.001	21.946	17.826	3.60	0.80	388A	382	80.4	101	3900	5200	69.0	63.0	89.0	92.0	3.60	0.80	3.6	0.35	1.69	0.93	0.421	0.223	388A	382
59.987	134.983	33.449	30.925	21.948	3.60	3.60	HM911244R	HM911216	153	181	2600	3700	84.0	74.0	112.0	123.0	3.60	3.60	(7.1)	0.82	0.73	0.40	1.37	0.806	HM911244R	HM911216
60.325	100.000	25.400	25.400	19.845	3.60	3.20	28985	28921	91.4	137	3700	4900	73.0	67.0	89.0	96.0	3.60	3.20	2.6	0.43	1.41	0.78	0.533	0.230	28985	28921
	100.000	25.400	25.400	19.845	3.60	0.80	28985	28921A	91.4	137	3700	4900	73.0	67.0	91.0	96.0	3.60	0.80	2.6	0.43	1.41	0.78	0.533	0.235	28985	28921A
	101.600	25.400	25.400	19.845	3.60	3.20	28985	28920	91.4	137	3700	4900	73.0	67.0	89.0	96.0	3.60	3.20	2.6	0.43	1.41	0.78	0.533	0.269	28985	28920
	112.713	30.163	30.048	23.813	3.60	3.20	3980	3920	111	164	3400	4500	75.0	68.0	99.0	106.0	3.60	3.20	4.3	0.40	1.49	0.82	0.853	0.448	3980	3920
	123.825	38.100	36.678	30.163	7.90	3.20	557A	552A	162	223	3200	4200	84.0	69.0	109.0	116.0	7.90	3.20	9.4	0.35	1.73	0.95	1.3	0.756	557A	552A
	127.000	44.450	44.450	34.925	3.60	3.20	65237	65500	208	269	3300	4400	82.0	71.0	107.0	119.0	3.60	3.20	9.3	0.49	1.23	0.68	1.58	1.02	65237	65500
	136.525	46.038	46.038	36.513	3.60	3.20	H715332	H715311	231	369	2800	3700	84.0	78.0	118.0	132.0	3.60	3.20	9.0	0.47	1.27	0.70	2.56	0.950	H715332	H715311
61.913	110.000	21.999	21.996	18.824	0.80	1.20	392	394A	86.4	116	3400	4500	70.0	69.0	101.0	104.5	0.80	1.20	0.7	0.40	1.49	0.82	0.605	0.259	392	394A

Note: (°) Minus value of load center "a" indicates that the center is located outside of cone backface.

Tapered Roller Bearings

Inch Series

Bore Diameter: 63.500~68.263mm



■Dynamic equivalent radial load
Pr=XFr+YFa

$\frac{F_a}{F_r} \leq e$		$\frac{F_a}{F_r} > e$	
X	Y	X	Y
1	0	0.4	Y ₁

Values e and Y₁ from table.

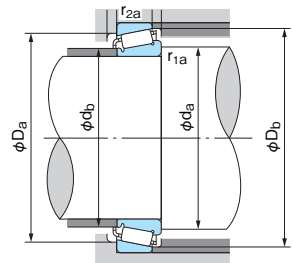
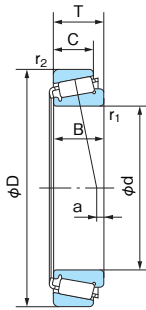
■Static equivalent radial load
Larger value of following to be used:
Por=0.5Fr+Y₀Fa
Por=Fr
Values Y₀ from table.

1N=0.102kgf

Boundary dimensions (mm)							Bearing No.		Basic load rating		Limiting speed (min ⁻¹)		Abutment and fillet dimensions (mm)						Load center (mm) a (°)	Constant ^e	Axial load factor		Mass(kg) Reference		Bearing No.	
d	D	T	B	C	r ₁ (min)	r ₂ (min)	Cone	Cup	Cr (kN)	Cor (kN)	Grease	Oil	d _a	d _b	D _a	D _b	r _{1a}	r _{2a}			Y ₁	Y ₀	Cone	Cup	Cone	Cup
63.500	107.950	25.400	25.400	19.050	3.60	3.20	29585	29520	92.8	143	3400	4500	77.0	71.0	96.0	103.0	3.60	3.20	0.7	0.46	1.31	0.72	0.644	0.277	29585	29520
	107.950	25.400	25.400	19.050	1.60	0.80	29586	29522	92.8	143	3400	4500	73.0	71.0	98.0	103.0	1.60	0.80	0.7	0.46	1.31	0.72	0.651	0.282	29586	29522
	110.000	21.999	21.996	18.824	1.60	1.20	390A	394A	86.4	116	3400	4500	73.0	70.0	101.0	104.5	1.60	1.20	0.7	0.40	1.49	0.82	0.579	0.259	390A	394A
	110.000	21.999	21.996	18.824	3.60	1.20	395	394A	86.4	116	3400	4500	77.0	70.0	101.0	104.5	3.60	1.20	0.7	0.40	1.49	0.82	0.575	0.259	395	394A
	110.000	25.400	25.400	19.050	3.60	1.20	29585	29521	92.8	143	3400	4500	77.0	71.0	99.0	104.0	3.60	1.20	0.7	0.46	1.31	0.72	0.644	0.333	29585	29521
	112.713	30.163	30.048	23.813	3.60	3.20	3982	3920	111	164	3400	4500	77.0	71.0	99.0	106.0	3.60	3.20	4.3	0.40	1.49	0.82	0.776	0.448	3982	3920
	112.713	30.163	30.163	23.813	3.60	3.20	39585	39520	147	207	3300	4500	77.0	71.0	101.0	107.0	3.60	3.20	6.9	0.34	1.77	0.97	0.908	0.355	39585	39520
	122.238	38.100	38.354	29.718	7.10	3.20	HM212047UR	HM212011UR	191	249	3200	4300	87.0	73.0	108.0	116.0	7.10	3.20	10.8	0.34	1.78	0.98	1.36	0.595	HM212047UR	HM212011UR
	123.825	38.100	36.678	30.163	3.60	3.20	559	552A	162	223	3200	4200	78.0	72.0	109.0	116.0	3.60	3.20	9.4	0.35	1.73	0.95	1.23	0.756	559	552A
	136.525	41.275	41.275	31.750	3.60	3.20	639	632	197	267	3000	3900	81.0	74.0	118.0	125.0	3.60	3.20	11.0	0.36	1.66	0.91	1.75	1.03	639	632
65.000	105.000	24.000	23.000	18.500	3.00	1.00	JLM710949UR	JLM710910UR	95.3	129	3500	4700	77.0	71.0	96.0	100.5	3.00	1.00	0.3	0.45	1.32	0.73	0.513	0.234	JLM710949UR	JLM710910UR
	110.000	28.000	28.000	22.500	3.00	2.50	JM511946E	JM511910E	136	191	3400	4600	78.0	72.0	99.0	105.0	3.00	2.50	4.0	0.40	1.49	0.82	0.733	0.338	JM511946E	JM511910E
	120.000	39.000	38.500	32.000	3.00	2.50	JH211749E	JH211710E	189	255	3200	4300	80.0	74.0	107.0	114.0	3.00	2.50	11.1	0.34	1.78	0.98	1.27	0.618	JH211749E	JH211710E
65.088	135.755	53.975	56.007	44.450	3.60	3.20	6379	6320	266	357	3000	4000	84.0	77.5	117.0	126.0	3.60	3.20	19.2	0.32	1.85	1.02	2.34	1.37	6379	6320
66.675	107.950	25.400	25.400	19.050	3.60	3.20	29590	29520	92.8	143	3400	4500	80.0	73.0	96.0	103.0	3.60	3.20	0.7	0.46	1.31	0.72	0.582	0.277	29590	29520
	107.950	25.400	25.400	19.050	3.60	0.80	29590	29522	92.8	143	3400	4500	80.0	73.0	96.0	103.0	3.60	0.80	0.7	0.46	1.31	0.72	0.582	0.282	29590	29522
	110.000	21.999	21.996	18.824	0.80	1.20	395A	394A	86.4	116	3400	4500	73.0	73.0	101.0	104.5	0.80	1.20	0.7	0.40	1.49	0.82	0.524	0.259	395A	394A
	110.000	21.999	21.996	18.824	3.60	1.20	395S	394A	86.4	116	3400	4500	79.0	73.0	101.0	104.5	3.60	1.20	0.7	0.40	1.49	0.82	0.519	0.259	395S	394A
	110.000	25.400	25.400	19.050	3.60	1.20	29590	29521	92.8	143	3400	4500	80.0	73.0	99.0	104.0	3.60	1.20	0.7	0.46	1.31	0.72	0.582	0.333	29590	29521
	112.713	30.163	30.048	23.813	3.60	3.20	3984	3920	111	164	3400	4500	80.0	74.0	99.0	106.0	3.60	3.20	4.3	0.40	1.49	0.82	0.705	0.448	3984	3920
	112.713	30.163	30.048	23.813	5.60	3.20	3994	3920	111	164	3400	4500	84.0	74.0	99.0	106.0	5.60	3.20	4.3	0.40	1.49	0.82	0.698	0.448	3994	3920
	112.713	30.163	30.163	23.813	3.60	3.20	39590	39520	147	207	3300	4500	80.0	74.0	101.0	107.0	3.60	3.20	6.9	0.34	1.77	0.97	0.832	0.355	39590	39520
	117.475	30.163	30.163	23.813	3.60	3.20	33262	33462	118	179	3200	4200	81.0	75.0	104.0	112.0	3.60	3.20	2.4	0.44	1.38	0.76	0.910	0.436	33262	33462
	122.238	38.100	38.354	29.718	3.60	1.60	HM212049	HM212010	191	249	3200	4300	82.0	75.5	110.0	116.0	3.60	1.60	10.8	0.34	1.78	0.98	1.26	0.596	HM212049	HM212010
	122.238	38.100	38.354	29.718	3.60	3.20	HM212049	HM212011	191	249	3200	4300	82.0	75.5	108.0	116.0	3.60	3.20	10.8	0.34	1.78	0.98	1.26	0.591	HM212049	HM212011
	123.825	38.100	36.678	30.163	3.60	3.20	560	552A	162	223	3200	4200	81.0	75.0	109.0	116.0	3.60	3.20	9.4	0.35	1.73	0.95	1.13	0.756	560	552A
	136.525	41.275	41.275	31.750	3.60	3.20	641	632	197	267	3000	3900	83.0	77.0	116.0	124.0	3.60	3.20	11.0	0.36	1.66	0.91	1.64	1.03	641	632
	135.755	53.975	56.007	44.450	4.30	3.20	6386	6320	266	357	3000	4000	87.0	77.5	117.0	126.0	4.30	3.20	19.2	0.32	1.85	1.02	2.27	1.37	6386	6320
	136.525	46.038	46.038	36.513	3.60	3.20	H715341	H715311	231	369	2800	3700	89.0	83.0	118.0	132.0	3.60	3.20	9.0	0.47	1.27	0.70	2.33	0.95	H715341	H715311
68.263	110.000	21.999	21.996	18.824	2.40	1.20	399A	394A	86.4	116	3400	4500	78.0	74.0	101.0	104.5	2.40	1.20	0.7	0.40	1.49	0.82	0.493	0.259	399A	394A
	110.000	21.999	21.996	18.824	5.20	1.20	399AS	394A	86.4	116	3400	4500	83.0	74.0	101.0	104.5	5.20	1.20	0.7	0.40	1.49	0.82	0.485	0.259	399AS	394A
	120.000	29.794	29.007	24.237	3.60	2.00	480	472	118	161	3200	4200	82.0	75.0	108.0	113.0	3.60	2.00	4.1	0.38	1.56	0.86	0.833	0.487	480	472
	123.825	38.100	36.678	30.163	3.60	3.20	560S	552A	162	223	3200	4200	83.0	76.0	109.0	116.0	3.60	3.20	9.4	0.35	1.73	0.95	1.09	0.756	560S	552A
	136.525	41.275	41.275	31.750	3.60	3.20	H414245.	H414210.	241	308	2900	3800	86.0	82.0	121.0	129.0	3.60	3.20	11.0	0.36	1.67	0.92	1.92	0.788	H414245.	H414210.

Note: (°) Minus value of load center "a" indicates that the center is located outside of cone backface.

Tapered Roller Bearings
Inch Series
Bore Diameter: 69.850~75,000mm



Dynamic equivalent radial load
 $P_r = X F_r + Y F_a$

$\frac{F_a}{F_r} \leq e$		$\frac{F_a}{F_r} > e$	
X	Y	X	Y
1	0	0.4	Y_1

Values e and Y_1 from table.

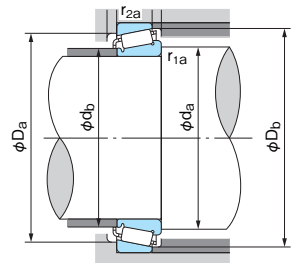
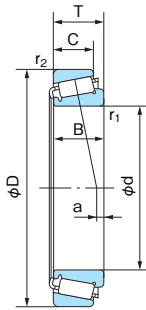
Static equivalent radial load
Larger value of following to be used:
 $P_0 = 0.5 F_r + Y_0 F_a$
 $P_0 = F_r$
Values Y_0 from table.

1N=0.102kgf

Boundary dimensions (mm)							Bearing No.		Basic load rating		Limiting speed (min ⁻¹)		Abutment and fillet dimensions (mm)						Load center (mm) a (°)	Constant e	Axial load factor		Mass(kg) Reference		Bearing No.	
d	D	T	B	C	r ₁ (min)	r ₂ (min)	Cone	Cup	Cr (kN)	Cor (kN)	Grease	Oil	d _a	d _b	D _a	D _b	r _{1a}	r _{2a}			Y ₁	Y ₀	Cone	Cup	Cone	Cup
69.850	112.713	25.400	25.400	19.050	1.60	3.20	29675	29620	97	155	3200	4300	80.0	77.0	101.0	109.0	1.60	3.20	(0.8)	0.49	1.23	0.68	0.676	0.27	29675	29620
	117.475	30.163	30.163	23.813	3.60	3.20	33275	33462	118	179	3200	4200	84.0	77.0	104.0	112.0	3.60	3.20	2.4	0.44	1.38	0.76	0.830	0.436	33275	33462
	120.000	29.794	29.007	24.237	3.60	2.00	482	472	118	161	3200	4200	83.0	77.0	108.0	113.0	3.60	2.00	4.1	0.38	1.56	0.86	0.791	0.487	482	472
	120.000	29.794	30.163	23.444	3.60	0.80	33275	33472	118	179	3200	4200	84.0	77.0	107.0	113.0	3.60	0.80	2.4	0.44	1.38	0.76	0.832	0.517	33275	33472
	120.000	32.545	32.545	26.195	3.60	3.20	47487R	47420	150	218	3100	4200	84.0	78.0	107.0	114.0	3.60	3.20	6.0	0.36	1.67	0.92	1.01	0.476	47487R	47420
	127.000	36.513	36.170	28.575	3.60	3.20	566	563	156	226	3000	4000	85.0	78.0	112.0	120.0	3.60	3.20	7.9	0.36	1.65	0.91	1.24	0.648	566	563
	136.525	41.275	41.275	31.750	3.60	3.20	643	632	197	267	3000	3900	86.0	80.0	118.0	125.0	3.60	3.20	11.0	0.36	1.66	0.91	1.53	1.03	643	632
	146.050	41.275	39.688	25.400	3.60	3.20	H913849R.F	H913810.F	202	237	2300	3300	95.0	82.5	124.0	138.0	3.60	3.20	(4.0)	0.78	0.77	0.42	2.06	0.9	H913849R.F	H913810.F
70.000	110.000	26.000	25.000	20.500	1.00	2.50	JLM813049	JLM813010	103	158	3300	4400	78.0	77.0	98.0	105.0	1.00	2.50	(0.2)	0.49	1.23	0.68	0.590	0.300	JLM813049	JLM813010
	115.000	29.000	29.000	23.000	3.00	2.50	JM612949	JM612910	123	173	3200	4300	83.0	77.0	103.0	110.0	3.00	2.50	2.8	0.43	1.39	0.77	0.776	0.358	JM612949	JM612910
	120.000	29.794	29.007	24.237	2.00	2.00	484	472	118	161	3200	4200	80.0	77.0	108.0	113.0	2.00	2.00	4.1	0.38	1.56	0.86	0.791	0.487	484	472
71.438	117.475	30.163	30.163	23.813	3.60	3.20	33281	33462	118	179	3200	4200	85.0	79.0	104.0	112.0	3.60	3.20	2.4	0.44	1.38	0.76	0.789	0.436	33281	33462
	120.000	29.794	30.163	23.444	3.60	0.80	33281	33472	118	179	3200	4200	85.0	79.0	107.0	113.0	3.60	0.80	2.4	0.44	1.38	0.76	0.789	0.518	33281	33472
	120.000	32.545	32.545	26.195	3.60	3.20	47490R	47420	150	218	3100	4200	86.0	79.0	107.0	114.0	3.60	3.20	6.0	0.36	1.67	0.92	0.964	0.476	47490R	47420
	136.525	41.275	41.275	31.750	6.40	3.20	645	632	197	267	3000	3900	93.0	81.0	118.0	125.0	6.40	3.20	11.0	0.36	1.66	0.91	1.46	1.03	645	632
	136.525	41.275	41.275	31.750	3.60	3.20	H414249.	H414210.	241	308	2900	3800	89.0	83.3	121.0	129.0	3.60	3.20	11.0	0.36	1.67	0.92	1.80	0.788	H414249.	H414210.
	136.525	46.038	46.038	36.513	3.60	3.20	H715345	H715311	231	369	2800	3700	93.0	87.0	118.0	132.0	3.60	3.20	9.0	0.47	1.27	0.70	2.15	0.95	H715345	H715311
73.025	112.713	25.400	25.400	19.050	3.60	3.20	29685	29620	97	155	3200	4300	86.0	80.0	101.0	109.0	3.60	3.20	(0.8)	0.49	1.23	0.68	0.602	0.27	29685	29620
	117.475	30.163	30.163	23.813	3.60	3.20	33287	33462	118	179	3200	4200	87.0	80.0	104.0	112.0	3.60	3.20	2.4	0.44	1.38	0.76	0.747	0.436	33287	33462
	120.000	29.794	30.163	23.444	3.60	0.80	33287	33472	118	179	3200	4200	87.0	80.0	107.0	113.0	3.60	0.80	2.4	0.44	1.38	0.76	0.747	0.518	33287	33472
	127.000	36.513	36.170	28.575	3.60	3.20	567	563	156	226	3000	4000	88.0	81.0	112.0	120.0	3.60	3.20	7.9	0.36	1.65	0.91	1.14	0.648	567	563
	139.992	36.513	36.098	28.575	3.60	3.20	576R	572	175	262	2700	3600	90.0	83.0	125.0	133.0	3.60	3.20	5.5	0.40	1.49	0.82	1.74	0.779	576R	572
	115.000	25.000	25.000	19.000	3.00	2.50	JLM714149E	JLM714110E	101	151	3100	4200	87.0	81.0	104.0	110.0	3.00	2.50	(0.5)	0.46	1.31	0.72	0.612	0.269	JLM714149E	JLM714110E
75.000	120.000	31.000	29.500	25.000	3.00	2.50	JM714249	JM714210	145	216	3100	4100	88.0	82.9	108.0	115.0	3.00	2.50	3.0	0.44	1.35	0.74	0.846	0.43	JM714249	JM714210
	145.000	51.000	51.000	42.000	3.00	2.50	JH415647	JH415610	290	412	2700	3600	94.0	89.0	129.0	139.0	3.00	2.50	14.4	0.36	1.60	0.91	2.66	1.18	JH415647	JH415610

Note: (°) Minus value of load center "a" indicates that the center is located outside of cone backface.

Tapered Roller Bearings
Inch Series
Bore Diameter: 76.200~84.975mm



Dynamic equivalent radial load
 $P_r = X F_r + Y F_a$

$\frac{F_a}{F_r} \leq e$		$\frac{F_a}{F_r} > e$	
X	Y	X	Y
1	0	0.4	Y_1

Values e and Y_1 from table.

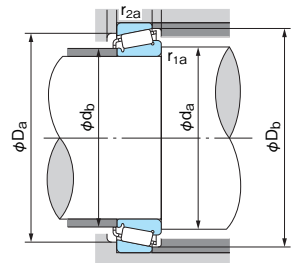
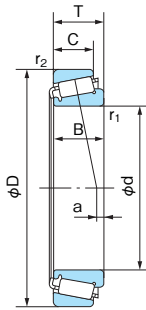
Static equivalent radial load
Larger value of following to be used:
 $P_{0r} = 0.5 F_r + Y_0 F_a$
 $P_{0r} = F_r$
Values Y_0 from table.

1N=0.102kgf

Boundary dimensions (mm)							Bearing No.		Basic load rating		Limiting speed (min ⁻¹)		Abutment and fillet dimensions (mm)						Load center (mm)	Constant e	Axial load factor		Mass(kg) Reference		Bearing No.	
d	D	T	B	C	r ₁ (min)	r ₂ (min)	Cone	Cup	Cr (kN)	Cor (kN)	Grease	Oil	d _a	d _b	D _a	D _b	r _{1a}	r _{2a}	a (°)		Y ₁	Y ₀	Cone	Cup	Cone	Cup
76.200	121.442	24.608	23.012	17.463	2.00	2.00	34300	34478	90	127	3000	4000	86.0	83.0	110.0	116.0	2.00	2.00	(2.2)	0.45	1.33	0.73	0.622	0.312	34300	34478
	127.000	26.988	23.012	19.842	2.00	3.20	34300	34500	90	127	3000	4000	86.0	83.0	118.0	112.0	2.00	3.20	(2.2)	0.45	1.33	0.73	0.622	0.536	34300	34500
	127.000	30.163	31.001	22.225	6.40	3.20	42688	42620	143	225	2400	3200	96.0	84.0	114.0	121.0	6.40	3.20	3.1	0.42	1.43	0.79	1.04	0.434	42688	42620
	133.350	33.338	33.338	26.195	6.40	3.20	47678	47620	145	226	2700	3700	97.0	90.0	119.0	128.0	6.40	3.20	4.2	0.40	1.48	0.82	1.31	0.571	47678	47620
	133.350	33.338	33.338	26.195	3.60	3.20	47679	47620	145	226	2700	3700	91.0	85.0	119.0	128.0	3.60	3.20	4.2	0.40	1.48	0.82	1.32	0.571	47679	47620
	135.733	44.450	46.101	34.925	3.60	3.20	5760	5735	213	337	2800	3700	94.0	88.0	119.0	130.0	3.60	3.20	11.5	0.41	1.48	0.81	1.85	0.877	5760	5735
	136.525	30.163	29.769	22.225	3.60	3.20	495A	493	133	198	2700	3600	92.0	86.0	122.0	130.0	3.60	3.20	0.3	0.44	1.35	0.74	1.26	0.544	495A	493
	136.525	30.163	29.769	22.225	6.40	3.20	495AX	493	133	198	2700	3600	98.0	86.0	122.0	130.0	6.40	3.20	0.3	0.44	1.35	0.74	1.25	0.544	495AX	493
	139.992	36.513	36.098	28.575	3.60	3.20	575R	572	175	262	2700	3600	92.0	86.0	125.0	133.0	3.60	3.20	5.5	0.40	1.49	0.82	1.64	0.779	575R	572
	146.050	41.275	41.275	31.750	3.60	3.20	659	653	208	301	2600	3400	93.0	87.0	131.0	139.0	3.60	3.20	7.7	0.41	1.47	0.81	2.16	0.880	659	653
	152.400	41.275	41.275	31.750	3.60	3.20	659	652	208	301	2600	3400	93.0	87.0	134.0	141.0	3.60	3.20	7.7	0.41	1.47	0.81	2.16	1.25	659	652
	161.925	49.213	46.038	31.750	3.60	3.20	9285R	9220	246	286	2100	2900	103.0	90.5	138.0	153.0	3.60	3.20	(1.0)	0.71	0.85	0.47	3.01	1.38	9285R	9220
	161.925	47.625	48.260	38.100	3.60	3.20	755	752	273	391	2400	3200	95.0	88.0	144.0	150.0	3.60	3.20	12.1	0.34	1.76	0.97	3.12	1.59	755	752
77.788	117.475	25.400	25.400	19.050	3.60	3.20	LM814849	LM814810	101	166	3100	4100	91.0	85.0	105.0	113.0	3.60	3.20	(2.2)	0.51	1.18	0.65	0.619	0.295	LM814849	LM814810
	127.000	30.163	31.001	22.225	3.60	3.20	42690	42620	142	209	2400	3200	91.0	85.0	114.0	121.0	3.60	3.20	3.1	0.42	1.43	0.79	1.00	0.434	42690	42620
79.375	190.500	57.150	57.531	46.038	3.60	3.20	HH221431	HH221410	440	602	2000	2700	103.0	97.0	171.0	179.0	3.60	3.20	14.7	0.33	1.79	0.99	6.16	2.21	HH221431	HH221410
80.000	130.000	35.000	34.000	28.500	3.00	2.50	JM515649	JM515610	168	256	2800	3800	94.0	88.0	117.0	125.0	3.20	2.50	5.4	0.39	1.54	0.85	1.19	0.575	JM515649	JM515610
80.963	136.525	30.163	29.769	22.225	3.60	3.20	496	493	133	198	2700	3600	95.0	89.0	122.0	130.0	3.60	3.20	0.3	0.44	1.35	0.74	1.12	0.544	496	493
	150.089	44.450	46.673	36.513	5.20	3.20	740R	742	264	368	2500	3400	101.0	91.0	134.0	142.0	5.20	3.20	12.0	0.33	1.84	1.01	2.30	1.06	740R	742
82.550	125.413	25.400	25.400	19.845	3.60	1.60	27687	27620	101	162	2900	3800	96.0	89.0	115.0	120.0	3.60	1.60	0.7	0.42	1.44	0.79	0.710	0.344	27687	27620
	133.350	30.163	29.769	22.225	3.60	3.20	495	492A	133	198	2700	3600	97.0	90.0	120.0	128.0	3.60	3.20	0.3	0.44	1.35	0.74	1.08	0.429	495	492A
	133.350	33.338	33.338	26.195	3.60	3.20	47686	47620	145	226	2700	3700	97.0	90.0	119.0	128.0	3.60	3.20	4.2	0.40	1.48	0.82	1.12	0.571	47686	47620
	133.350	33.338	33.338	26.195	6.70	3.20	47687	47620	145	226	2700	3700	103.0	90.0	119.0	128.0	6.70	3.20	4.2	0.40	1.48	0.82	1.1	0.571	47687	47620
	133.350	39.688	39.688	32.545	3.60	3.20	HM516449	HM516410	177	306	2800	3700	99.0	92.0	118.0	128.0	3.60	3.20	7.5	0.40	1.49	0.82	1.34	0.762	HM516449	HM516410
	136.525	30.163	29.769	22.225	3.60	3.20	495	493	133	198	2700	3600	97.0	90.0	122.0	130.0	3.60	3.20	0.3	0.44	1.35	0.74	1.08	0.544	495	493
	139.992	36.513	36.098	28.575	3.60	3.20	580R	572	175	262	2700	3600	98.0	91.0	125.0	133.0	3.60	3.20	5.5	0.40	1.49	0.82	1.41	0.779	580R	572
	146.050	41.275	41.275	31.750	3.60	3.30	663	653	208	301	2600	3400	99.0	92.0	131.0	139.0	3.60	3.30	7.7	0.41	1.47	0.81	1.91	0.880	663	653
	150.089	44.450	46.673	36.513	3.60	3.20	749AR	742	264	368	2500	3400	99.0	93.0	134.0	142.0	3.60	3.20	12.0	0.33	1.84	1.01	2.23	1.06	749AR	742
	152.400	41.275	41.275	31.750	3.60	3.20	663	652	208	301	2600	3400	99.0	92.0	134.0	141.0	3.60	3.20	7.7	0.41	1.47	0.81	1.91	1.25	663	652
83.345	125.413	25.400	25.400	19.845	3.60	1.60	27690	27620	101	162	2900	3800	96.0	90.0	115.0	120.0	3.60	1.60	0.7	0.42	1.44	0.79	0.689	0.344	27690	27620
84.138	136.525	30.163	29.769	22.225	3.60	3.20	498	493	133	198	2700	3600	98.0	91.0	122.0	130.0	3.60	3.20	0.3	0.44	1.35	0.74	1.03	0.544	498	493
	152.400	41.275	41.275	31.750	3.60	3.20	664	652	208	301	2600	3400	99.0	93.0	134.0	141.0	3.60	3.20	7.7	0.41	1.47	0.81	1.84	1.25	664	652
	171.450	49.213	46.038	31.750	3.60	3.20	9385	9321	250	299	1900	2700	111.0	98.0	147.0	164.0	3.60	3.20	(5.9)	0.76	0.79	0.43	3.2	1.49	9385	9321
84.975	125.413	25.400	25.400	19.845	5.00	1.60	27695	27620	101	162	2900	3800	100.0	91.0	115.0	120.0	5.00	1.60	0.7	0.42	1.44	0.79	0.644	0.344	27695	27620

Note: (°) Minus value of load center "a" indicates that the center is located outside of cone backface.

Tapered Roller Bearings
Inch Series
Bore Diameter: 85.000~95,000mm



Dynamic equivalent radial load
 $P_r = X F_r + Y F_a$

$\frac{F_a}{F_r} \leq e$		$\frac{F_a}{F_r} > e$	
X	Y	X	Y
1	0	0.4	Y_1

Values e and Y_1 from table.

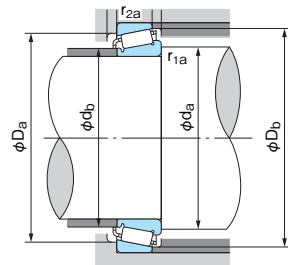
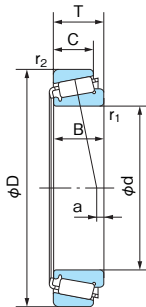
Static equivalent radial load
Larger value of following to be used:
 $P_0 = 0.5 F_r + Y_0 F_a$
 $P_0 = F_r$
Values Y_0 from table.

1N=0.102kgf

Boundary dimensions (mm)							Bearing No.		Basic load rating		Limiting speed (min ⁻¹)		Abutment and fillet dimensions (mm)						Load center (mm) a (°)	Constant e	Axial load factor		Mass(kg) Reference		Bearing No.	
d	D	T	B	C	r ₁ (min)	r ₂ (min)	Cone	Cup	Cr (kN)	Cor (kN)	Grease	Oil	d _a	d _b	D _a	D _b	r _{1a}	r _{2a}			Y ₁	Y ₀	Cone	Cup	Cone	Cup
85.000	130.000	30.000	29.000	24.000	6.00	2.50	JM716648	JM716610	142	228	2800	3700	104.0	92.0	117.0	125.0	6.00	2.50	0.9	0.44	1.35	0.74	0.933	0.456	JM716648	JM716610
	130.000	30.000	29.000	24.000	3.00	2.50	JM716649	JM716610	142	228	2800	3700	98.0	92.0	117.0	125.0	3.00	2.50	0.9	0.44	1.35	0.74	0.937	0.456	JM716649	JM716610
	140.000	39.000	38.000	31.500	3.00	2.50	JHM516849	JHM516810	203	308	2700	3500	100.0	93.9	125.0	134.0	3.00	2.50	6.2	0.41	1.47	0.81	1.54	0.759	JHM516849	JHM516810
85.001	188.913	53.297	52.761	31.750	3.60	3.20	90334	90744	264	336	1700	2400	116.0	112.0	161.0	179.0	3.60	3.20	(10.0)	0.87	0.69	0.38	4.63	1.87	90334	90744
85.725	133.350	30.163	29.769	22.225	3.60	3.20	497	492A	133	198	2700	3600	99.0	93.0	120.0	128.0	3.60	3.20	0.3	0.44	1.35	0.74	0.978	0.429	497	492A
	136.525	30.163	29.769	22.225	3.60	3.20	497	493	133	198	2700	3600	99.0	93.0	122.0	130.0	3.60	3.20	0.3	0.44	1.35	0.74	0.978	0.544	497	493
	142.138	42.863	42.863	34.133	4.80	3.20	HM617049	HM617010	219	351	2600	3500	106.0	95.7	125.0	137.0	4.80	3.20	7.7	0.43	1.39	0.76	1.72	0.902	HM617049	HM617010
	146.050	41.275	41.275	31.750	3.60	3.30	665	653	208	301	2600	3400	102.0	95.0	131.0	139.0	3.60	3.30	7.7	0.41	1.47	0.81	1.77	0.880	665	653
	146.050	41.275	41.275	31.750	6.40	3.30	665A	653	208	301	2600	3400	107.0	95.0	131.0	139.0	6.40	3.30	7.7	0.41	1.47	0.81	1.76	0.880	665A	653
	152.400	39.688	36.322	30.163	3.60	3.20	596	592A	183	287	2400	3300	102.0	96.0	135.0	144.0	3.60	3.20	2.6	0.44	1.36	0.75	1.83	1.04	596	592A
	161.925	47.625	48.260	38.100	3.60	3.20	758	752	273	391	2400	3200	103.0	97.0	144.0	150.0	3.60	3.20	12.1	0.34	1.76	0.97	2.67	1.59	758	752
88.900	152.400	39.688	36.322	33.338	3.60	3.20	593	592	183	287	2400	3300	104.0	98.0	135.0	145.0	3.60	3.20	2.6	0.44	1.36	0.75	1.71	1.1	593	592
	152.400	39.688	36.322	30.163	6.40	3.20	593A	592A	183	287	2400	3300	110.0	98.0	135.0	144.0	6.40	3.20	2.6	0.44	1.36	0.75	1.7	1.04	593A	592A
	152.400	39.688	36.322	30.163	3.60	3.20	593	592A	183	287	2400	3300	104.0	98.0	135.0	144.0	3.60	3.20	2.6	0.44	1.36	0.75	1.71	1.04	593	592A
	152.400	39.688	39.688	30.163	6.40	3.20	HM518445	HM518410	248	359	2400	3200	110.0	98.0	135.0	114.0	6.40	3.20	6.6	0.40	1.49	0.82	2.10	0.768	HM518445	HM518410
	161.925	47.625	48.260	38.100	3.60	3.20	759	752	273	391	2400	3200	106.0	99.0	144.0	150.0	3.60	3.20	12.1	0.34	1.76	0.97	2.50	1.59	759	752
	161.925	53.975	55.100	42.863	3.60	3.20	6580R	6535	316	471	2400	3200	109.0	98.0	141.0	154.0	3.60	3.20	12.5	0.40	1.50	0.82	3.09	1.65	6580R	6535
	168.275	53.975	56.363	41.275	3.60	3.20	850R	832	344	467	2300	3100	106.0	100.0	149.0	155.0	3.60	3.20	19.0	0.30	2.00	1.10	3.29	1.72	850R	832
89.974	146.975	40.000	40.000	32.499	7.10	3.60	HM218248	HM218210	206	310	2500	3300	112.0	99.0	133.0	141.0	7.10	3.60	9.2	0.33	1.80	0.99	1.66	0.784	HM218248	HM218210
90.000	145.000	35.000	34.000	27.000	3.00	2.50	JM718149UR	JM718110UR	194	291	2500	3400	105.0	99.0	131.0	139.0	3.00	2.50	2.3	0.44	1.35	0.74	1.47	0.652	JM718149UR	JM718110UR
	145.000	35.000	34.000	27.000	6.00	2.50	JM718149AUR	JM718110UR	194	291	2500	3400	111.0	99.0	131.0	139.0	6.00	2.50	2.3	0.44	1.35	0.74	1.46	0.652	JM718149AUR	JM718110UR
	155.000	44.000	44.000	35.500	3.00	2.50	JHM318448UR	JHM318410UR	290	407	2400	3200	106.0	100.0	140.0	148.0	3.00	2.50	10.4	0.34	1.76	0.97	2.37	1.00	JHM318448UR	JHM318410UR
	161.925	53.975	55.100	42.863	3.00	3.20	6581XR	6535	316	471	2400	3200	102.0	98.0	141.0	154.0	3.00	3.20	12.9	0.40	1.50	0.82	3.02	1.65	6581XR	6535
90.488	161.925	47.625	48.260	38.100	3.60	3.20	760	752	273	391	2400	3200	107.0	101.0	144.0	150.0	3.60	3.20	12.1	0.34	1.76	0.97	2.42	1.59	760	752
92.075	146.050	33.338	34.925	26.195	3.60	3.20	47890R	47820	178	293	2500	3300	107.0	101.0	131.0	140.0	3.60	3.20	1.2	0.45	1.34	0.74	1.46	0.657	47890R	47820
	150.000	35.992	36.322	27.000	3.60	3.00	598	593X	183	287	2400	3300	107.0	101.0	134.0	142.0	3.60	3.00	2.6	0.44	1.36	0.75	1.58	0.763	598	593X
	150.000	35.992	36.322	27.000	6.40	3.00	598A	593X	183	287	2400	3300	113.0	101.0	134.0	142.0	6.40	3.00	2.6	0.44	1.36	0.75	1.57	0.763	598A	593X
	152.400	39.688	36.322	33.338	3.60	3.20	598	592	183	287	2400	3300	107.0	101.0	135.0	145.0	3.60	3.20	2.6	0.44	1.36	0.75	1.58	1.1	598	592
	152.400	39.688	36.322	30.163	3.60	3.20	598	592A	183	287	2400	3300	107.0	101.0	135.0	144.0	3.60	3.20	2.6	0.44	1.36	0.75	1.58	1.04	598	592A
	152.400	39.688	36.322	30.163	6.40	3.20	598A	592A	183	287	2400	3300	113.0	101.0	135.0	144.0	6.40	3.20	2.6	0.44	1.36	0.75	1.57	1.04	598A	592A
	152.400	39.688	36.322	30.163	6.40	3.20	598AUR	592AUR	183	287	2400	3300	113.0	101.0	135.0	144.0	6.40	3.20	2.6	0.44	1.36	0.75	1.57	1.04	598AUR	592AUR
93.663	148.430	28.575	28.971	21.433	3.00	3.00	42368	42584	143	225	2400	3200	110.0	104.0	149.0	160.0	3.60	3.30	2.6	0.47	1.28	0.70	2.61	1.22	681	672
95.000	150.000	35.000	34.000	27.000	3.00	2.50	JM719149	JM719113	187	294	2400	3300	109.0	104.0	135.0	143.0	3.00	2.50	1.5	0.44	1.36	0.75	1.43	0.766	JM719149	JM719113

Note: (°) Minus value of load center "a" indicates that the center is located outside of cone backface.

Tapered Roller Bearings
Inch Series
Bore Diameter: 95.250~120.650mm



Dynamic equivalent radial load

$P_r = X F_r + Y F_a$

$\frac{F_a}{F_r} \leq e$		$\frac{F_a}{F_r} > e$	
X	Y	X	Y
1	0	0.4	Y_1

Values e and Y_1 from table.

Static equivalent radial load

Larger value of following to be used:

$P_{0r} = 0.5 F_r + Y_0 F_a$

$P_{0r} = F_r$

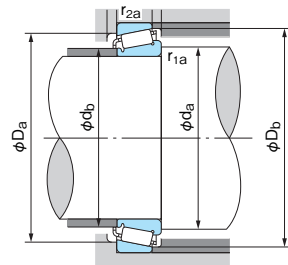
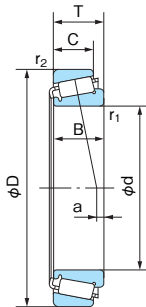
Values Y_0 from table.

1N=0.102kgf

Boundary dimensions (mm)							Bearing No.		Basic load rating		Limiting speed (min ⁻¹)		Abutment and fillet dimensions (mm)						Load center (mm) a (1)	Constant e	Axial load factor		Mass(kg) Reference		Bearing No.	
d	D	T	B	C	r ₁ (min)	r ₂ (min)	Cone	Cup	Cr (kN)	Cor (kN)	Grease	Oil	d _a	d _b	D _a	D _b	r _{1a}	r _{2a}			Y ₁	Y ₀	Cone	Cup	Cone	Cup
95.250	146.050	33.338	34.925	26.195	3.60	3.20	47896R	47820	178	293	2500	3300	110.0	103.0	131.0	140.0	3.60	3.20	1.2	0.45	1.34	0.74	1.34	0.657	47896R	47820
	149.225	31.750	28.971	24.608	3.60	3.20	42376	42587	143	225	2400	3200	109.0	103.0	98.0	104.0	3.60	3.20	(3.3)	0.49	1.22	0.67	1.15	0.702	42376	42587
	150.000	35.992	36.322	27.000	3.60	3.00	594	593X	183	287	2400	3300	110.0	104.0	134.0	142.0	3.60	3.00	2.6	0.44	1.36	0.75	1.45	0.763	594	593X
	152.400	39.688	36.322	33.338	3.60	3.20	594	592	183	287	2400	3300	110.0	104.0	135.0	145.0	3.60	3.20	2.6	0.44	1.36	0.75	1.45	1.1	594	592
	152.400	39.688	36.322	30.163	3.60	3.20	594A	592A	183	287	2400	3300	110.0	104.0	135.0	144.0	3.60	3.20	2.6	0.44	1.36	0.75	1.45	1.04	594A	592A
	152.400	39.688	36.322	30.163	3.60	3.20	594	592A	183	287	2400	3300	110.0	104.0	135.0	144.0	3.60	3.20	2.6	0.44	1.36	0.75	1.45	1.04	594	592A
	168.275	41.275	41.275	30.163	3.60	3.30	683	672	224	349	2200	3000	113.0	106.0	149.0	160.0	3.60	3.30	2.6	0.47	1.28	0.70	2.46	1.22	683	672
96.838	148.430	28.575	28.971	21.433	3.60	3.00	42381	42584	143	225	2400	3200	110.0	104.0	134.0	142.0	3.60	3.00	(3.3)	0.49	1.22	0.67	1.1	0.546	42381	42584
99.975	156.975	42.000	42.000	34.000	7.90	3.60	HM220149	HM220110	245	396	2300	3100	122.9	109.0	142.0	151.0	7.90	3.60	9.6	0.33	1.80	0.99	2.04	0.862	HM220149	HM220110
100.000	155.000	36.000	35.000	28.000	3.00	2.50	JM720249E	JM720210E	204	328	2300	3100	115.0	109.0	140.0	149.0	3.00	2.50	0.3	0.47	1.27	0.70	1.64	0.763	JM720249E	JM720210E
	160.000	41.000	40.000	32.000	3.00	2.50	JHM720249	JHM720210	237	378	2300	3000	117.0	109.0	143.0	154.0	3.00	2.50	2.7	0.47	1.28	0.70	2.11	0.964	JHM720249	JHM720210
	200.000	52.761	49.213	34.925	3.60	3.20	98394X	98788	347	471	1400	1900	130.0	122.0	174.0	188.0	3.60	3.20	(1.9)	0.63	0.95	0.52	4.65	2.28	98394X	98788
100.013	157.163	36.513	36.116	26.195	3.60	3.20	52393	52618	180	288	2300	3000	116.0	109.0	142.0	152.0	3.60	3.20	0.5	0.47	1.26	0.69	1.74	0.694	52393	52618
101.600	157.163	36.513	36.116	26.195	3.60	3.20	52400	52618	180	288	2300	3000	117.0	111.0	142.0	152.0	3.60	3.20	0.5	0.47	1.26	0.69	1.67	0.694	52400	52618
	180.975	47.625	48.006	38.100	3.60	3.20	780	772	288	438	2100	2800	119.0	113.0	161.0	168.0	3.60	3.20	8.2	0.39	1.56	0.86	3.09	1.92	780	772
	190.500	57.150	57.531	46.038	7.90	3.20	HH221449	HH221410	440	602	2000	2700	131.0	115.0	171.0	179.0	7.90	3.20	14.7	0.33	1.79	0.99	4.72	2.21	HH221449	HH221410
	212.725	66.675	66.675	53.975	7.10	3.20	HH224335	HH224310	513	699	1800	2400	132.0	121.0	192.0	202.0	7.10	3.20	19.9	0.33	1.84	1.01	7.76	3.03	HH224335	HH224310
104.775	180.975	47.625	48.006	38.100	3.60	3.20	782	772	288	438	2100	2800	122.0	116.0	161.0	168.0	3.60	3.20	8.2	0.39	1.56	0.86	2.90	1.92	782	772
	180.975	47.625	48.006	38.100	6.40	3.20	786	772	288	438	2100	2800	128.0	116.0	161.0	168.0	6.40	3.20	8.2	0.39	1.56	0.86	2.88	1.92	786	772
	190.500	47.625	49.213	34.925	3.60	3.20	71412	71750	303	483	1900	2600	124.0	118.0	171.0	181.0	3.60	3.20	6.7	0.42	1.44	0.79	3.96	1.72	71412	71750
107.950	158.750	23.020	21.438	15.875	3.60	3.20	37425	37625	104	169	2200	3000	122.0	115.0	143.0	152.0	3.60	3.20	(13.5)	0.61	0.99	0.54	0.893	0.484	37425	37625
	165.100	36.513	36.513	26.988	3.60	3.20	56425R	56650	195	325	2200	2900	123.0	117.0	149.0	159.0	3.60	3.20	(2.0)	0.50	1.21	0.66	1.76	0.852	56425R	56650
	168.275	36.513	36.513	26.988	3.60	3.20	56425R	56662	195	325	2200	2900	123.0	117.0	150.0	160.0	3.60	3.20	(2.0)	0.50	1.21	0.66	1.76	1.03	56425R	56662
110.000	165.000	35.000	35.000	26.500	3.00	2.50	JM822049	JM822010	195	325	2200	2900	124.0	119.0	149.0	159.0	3.00	2.50	(3.1)	0.50	1.21	0.66	1.64	0.826	JM822049	JM822010
	180.000	47.000	46.000	38.000	3.00	2.50	JHM522649	JHM522610	306	487	2000	2700	127.0	122.0	162.0	172.0	3.00	2.50	6.4	0.41	1.48	0.81	3.08	1.49	JHM522649	JHM522610
114.300	190.500	47.625	49.213	34.925	3.60	3.20	71450	71750	303	483	1900	2600	132.0	125.0	171.0	181.0	3.60	3.20	6.7	0.42	1.44	0.79	3.33	1.72	71450	71750
	212.725	66.675	66.675	53.975	7.10	3.20	HH224346	HH224310	513	699	1800	2400	143.0	131.0	192.0	202.0	7.10	3.20	19.9	0.33	1.84	1.01	6.64	3.03	HH224346	HH224310
	212.725	66.675	66.675	53.975	7.10	3.20	938	932	450	674	1800	2400	141.0	128.0	187.0	193.0	7.10	3.20	19.1	0.33	1.84	1.01	5.96	4.07	938	932
	228.600	53.975	49.428	38.100	3.60	3.20	HM926740	HM926710	430	651	1300	1900	146.0	142.0	200.0	219.0	3.60	3.20	(14.1)	0.74	0.81	0.45	7.25	2.78	HM926740	HM926710
114.975	212.725	66.675	66.675	53.975	7.10	3.20	HH224349	HH224310	513	699	1800	2400	143.0	131.0	192.0	202.0	7.10	3.20	19.9	0.33	1.84	1.01	6.58	3.03	HH224349	HH224310
115.087	190.500	47.625	49.213	34.925	7.90	3.20	71455	71750	303	483	1900	2600	141.0	126.0	171.0	181.0	7.90	3.20	6.7	0.42	1.44	0.79	3.25	1.72	71455	71750
117.475	180.975	34.925	31.750	25.400	3.60	3.20	68462	68712	171	247	2000	2700	132.0	125.0	163.0	172.0	3.60	3.20	(5.8)	0.50	1.21	0.66	1.75	1.04	68462	68712
120.650	206.375	47.625	47.625	34.925	3.20	3.20	795	792	326	548	1700	2300	139.0	134.0	186.0	198.0	3.20	3.20	1.9	0.46	1.31	0.72	4.53	1.88	795	792
	234.950	63.500	63.500	49.213	6.40	3.20	95475	95925	523	826	1600	2100	149.0	137.0	209.0	217.0	6.40	3.20	13.6	0.37	1.62	0.89	8.34	4	95475	95925

Note: (°) Minus value of load center "a" indicates that the center is located outside of cone backface.

Tapered Roller Bearings
Inch Series
Bore Diameter: 123.825~196.850mm



Dynamic equivalent radial load
 $P_r = X F_r + Y F_a$

$\frac{F_a}{F_r} \leq e$		$\frac{F_a}{F_r} > e$	
X	Y	X	Y
1	0	0.4	Y_1

Values e and Y_1 from table.

Static equivalent radial load
Larger value of following to be used:
 $P_{0r} = 0.5 F_r + Y_0 F_a$
 $P_{0r} = F_r$
Values Y_0 from table.

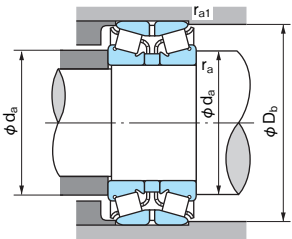
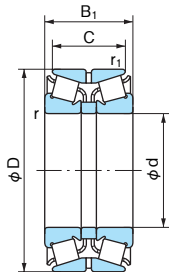
1N=0.102kgf

Boundary dimensions (mm)							Bearing No.		Basic load rating		Limiting speed (min ⁻¹)		Abutment and fillet dimensions (mm)						Load center (mm) a (°)	Constant ^e	Axial load factor		Mass(kg) Reference		Bearing No.	
d	D	T	B	C	r ₁ (min)	r ₂ (min)	Cone	Cup	Cr (kN)	Cor (kN)	Grease	Oil	d _a	d _b	D _a	D _b	r _{1a}	r _{2a}			Y ₁	Y ₀	Cone	Cup	Cone	Cup
123.825	182.563	39.688	38.100	33.338	3.60	3.20	48286	48220	227	429	1900	2500	139.0	133.0	168.0	176.0	3.60	3.20	5.6	0.31	1.97	1.08	2.3	1.13	48286	48220
125.298	228.600	53.975	49.428	38.100	3.60	3.20	HM926745	HM926710	430	651	1300	1900	154.0	143.0	200.0	219.0	3.60	3.20	(14.1)	0.74	0.81	0.45	6.46	2.78	HM926745	HM926710
127.000	182.563	39.688	38.100	33.338	3.60	3.20	48290	48220	227	429	1700	2300	141.0	135.0	168.0	176.0	3.60	3.20	5.6	0.31	1.97	1.08	2.11	1.13	48290	48220
	196.850	46.038	46.038	38.100	3.60	3.20	67388	67322	311	561	1700	2300	144.0	138.0	180.0	189.0	3.60	3.20	6.3	0.34	1.74	0.96	3.63	1.45	67388	67322
	215.900	47.625	47.625	34.925	3.60	3.20	74500	74850	322	549	1600	2200	148.0	141.0	196.0	208.0	3.60	3.20	(2.1)	0.49	1.23	0.68	4.92	1.93	74500	74850
	228.600	53.975	49.428	38.100	3.60	3.20	HM926747	HM926710	430	651	1300	1900	156.0	143.0	200.0	219.0	3.60	3.20	(14.1)	0.74	0.81	0.45	6.32	2.78	HM926747	HM926710
	254.000	77.788	82.550	61.913	9.50	6.40	HH228349	HH228310	717	1050	1500	2000	164.0	148.0	223.0	234.0	9.50	6.40	23.8	0.32	1.87	1.03	11.8	6.00	HH228349	HH228310
128.588	206.375	47.625	47.625	34.925	3.20	3.20	799	792	326	548	1700	2300	146.0	140.0	186.0	198.0	3.20	3.20	1.9	0.46	1.31	0.72	3.96	1.88	799	792
133.350	196.850	46.038	46.038	38.100	3.60	3.20	67390	67322	311	561	1700	2300	149.0	143.0	180.0	189.0	3.60	3.20	6.3	0.34	1.74	0.96	3.17	1.45	67390	67322
	215.900	47.625	47.625	34.925	3.60	3.20	74525	74850	322	549	1600	2200	152.0	146.0	196.0	208.0	3.60	3.20	(2.1)	0.49	1.23	0.68	4.44	1.93	74525	74850
136.525	190.500	39.688	39.688	33.338	3.60	3.20	48393	48320	236	472	1800	2400	151.0	144.0	177.0	184.0	3.60	3.20	3.8	0.32	1.87	1.03	2.25	1.15	48393	48320
139.700	228.600	57.150	57.150	44.450	3.60	3.20	898	892	439	730	1600	2100	160.0	153.0	205.0	216.0	3.60	3.20	6.6	0.42	1.43	0.78	5.6	3.1	898	892
	236.538	57.150	56.642	44.450	3.60	3.20	HM231132	HM231110	499	832	1500	2000	157.0	153.0	217.0	224.0	3.60	3.20	12.0	0.32	1.88	1.04	7.25	2.8	HM231132	HM231110
	254.000	66.675	66.675	47.625	7.10	3.20	99550	99100	549	913	1400	1900	170.0	156.0	227.0	238.0	7.10	3.20	11.7	0.41	1.47	0.81	10	4.19	99550	99100
142.875	193.675	28.575	28.575	23.020	1.60	1.60	36686	36620	187	375	1700	2300	153.0	151.0	182.0	188.0	1.60	1.60	(5.1)	0.37	1.63	0.90	1.71	0.715	36686	36620
	200.025	41.275	39.688	34.130	3.60	3.30	48685	48620	246	491	1700	2200	158.0	151.0	185.0	193.0	3.60	3.30	2.7	0.34	1.78	0.98	2.46	1.38	48685	48620
146.050	193.675	28.575	28.575	23.020	1.60	1.60	36690	36620	187	375	1700	2300	155.0	153.0	182.0	188.0	1.60	1.60	(5.1)	0.37	1.63	0.90	1.55	0.715	36690	36620
	236.538	57.150	56.642	44.450	3.60	3.20	HM231140	HM231110	499	832	1500	2000	164.0	160.0	217.0	224.0	3.60	3.20	12.0	0.32	1.88	1.04	6.65	2.8	HM231140	HM231110
149.225	236.538	57.150	56.642	44.450	6.40	3.20	HM231148	HM231110	499	832	1500	2000	172.0	163.0	217.0	224.0	6.40	3.20	12.0	0.32	1.88	1.04	6.3	2.8	HM231148	HM231110
158.750	225.425	41.275	39.688	33.338	3.60	3.20	46780R	46720	258	568	1400	1900	176.0	169.0	209.0	218.0	3.60	3.20	(2.7)	0.38	1.57	0.86	3.52	1.64	46780R	46720
165.100	247.650	47.625	47.625	38.100	3.60	3.20	67780	67720	346	701	1300	1800	185.0	179.0	229.0	240.0	3.60	3.20	(4.7)	0.44	1.36	0.75	5.66	2.3	67780	67720
168.275	247.650	47.625	47.625	38.100	3.60	3.20	67782	67720	346	701	1300	1800	187.0	181.0	229.0	240.0	3.60	3.20	(4.7)	0.44	1.36	0.75	5.35	2.3	67782	67720
170.000	230.000	39.000	38.000	31.000	3.00	2.50	JHM534149	JHM534110	291	558	1400	1900	184.0	178.0	217.0	224.0	3.00	2.50	(4.6)	0.38	1.57	0.86	3.17	1.29	JHM534149	JHM534110
	240.000	46.000	44.500	37.000	3.00	2.50	JM734449	JM734410	353	666	1400	1800	185.0	180.0	222.0	232.0	3.00	2.50	(4.1)	0.44	1.37	0.75	4.31	2.00	JM734449	JM734410
177.800	247.650	47.625	47.625	38.100	3.60	3.20	67790	67720	346	701	1300	1800	194.0	188.0	229.0	240.0	3.60	3.20	(4.7)	0.44	1.36	0.75	4.39	2.3	67790	67720
180.000	250.000	47.000	45.000	37.000	3.00	2.50	JM736149	JM736110	365	705	1300	1700	196.0	191.0	232.0	243.0	3.00	2.50	(8.4)	0.48	1.25	0.69	4.47	2.1	JM736149	JM736110
184.150	266.700	47.625	46.833	38.100	3.60	3.20	67883	67820	339	703	1200	1600	204.0	198.0	246.0	259.0	3.60	3.20	(10.2)	0.48	1.26	0.69	6.06	2.53	67883	67820
187.325	266.700	47.625	46.833	38.100	3.60	3.20	67884	67820	339	703	1200	1600	206.0	201.0	246.0	259.0	3.60	3.20	(10.2)	0.48	1.26	0.69	5.76	2.53	67884	67820
190.000	260.000	46.000	44.000	36.500	3.00	2.50	JM738249	JM738210	369	723	1200	1700	206.0	200.0	242.0	252.0	3.00	2.50	(10.1)	0.48	1.26	0.69	4.71	2.18	JM738249	JM738210
196.850	254.000	28.575	27.783	21.433	1.60	1.60	L540049	L540010	188	387	1200	1600	207.0	205.0	243.0	247.0	1.60	1.60	(14.6)	0.40	1.51	0.83	2.34	1.02	L540049	L540010

Note: (°) Minus value of load center "a" indicates that the center is located outside of cone backface.

Double-row Tapered Roller Bearings - Outward

Bore Diameter: 25~75mm



Dynamic equivalent radial load

$P_r = X F_r + Y F_a$

$\frac{F_a}{F_r} \leq e$		$\frac{F_a}{F_r} > e$	
X	Y	X	Y
1	Y_1	0.67	Y_2

Values e, Y_1 and Y_2 from table.

Static equivalent radial load

$P_{0r} = F_r + Y_0 F_a$

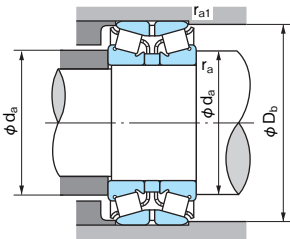
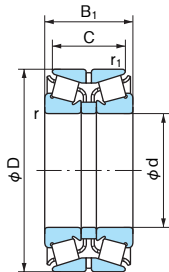
Values Y_0 from table.

1N=0.102kgf

Boundary dimensions (mm)						Bearing No.	Basic dynamic load rating Cr (N)	Basic static load rating Cor (N)		Abutment and fillet dimensions (mm)				Constant e	Axial load factor			Mass (kg)	Bearing No.
d	D	B1	C	r (min)	r1 (min)					da (min)	Db (min)	ra (max)	ra1 (max)		Y1	Y2	Y0		
25	62	40	29.5	1.5	0.6	H-25KDE13	68300	84900		33.5	58.5	1.5	0.6	0.83	0.82	1.22	0.80	0.592	H-25KDE13
30	72	45	31.5	1.5	0.6	H-30KDE13	87300	110000		38.5	68	1.5	0.6	0.83	0.82	1.22	0.80	0.872	H-30KDE13
35	80	51	35.5	2	0.6	H-35KDE13	108000	138000		45	76.5	2	0.6	0.83	0.82	1.22	0.80	1.2	H-35KDE13
40	80	45	37.5	1.5	0.6	H-40KBE02	108000	138000		48.5	75	1.5	0.6	0.37	1.80	2.68	1.76	0.954	H-40KBE02
	80	55	43.5	1.5	0.6	H-40KBE22	133000	182000		48.5	75	1.5	0.6	0.37	1.80	2.68	1.76	1.19	H-40KBE22
	90	56	45.5	2	0.6	H-40KBE03	155000	202000		50	82	2	0.6	0.35	1.96	2.91	1.91	1.67	H-40KBE03
	90	56	39.5	2	0.6	H-40KDE13	138000	180000		50	86.5	2	0.6	0.83	0.82	1.22	0.80	1.67	H-40KDE13
45	85	47	37.5	1.5	0.6	H-45KBE02	115000	155000		53.5	80	1.5	0.6	0.40	1.67	2.48	1.63	1.1	H-45KBE02
	85	55	43.5	1.5	0.6	H-45KBE22	134000	188000		53.5	81	1.5	0.6	0.40	1.67	2.48	1.63	1.31	H-45KBE22
	100	60	49.5	2	0.6	45KBE03	193000	256000		55	93	2	0.6	0.35	1.96	2.91	1.91	2.2	45KBE03
	100	60	41.5	2	0.6	45KDE13	163000	214000		55	96	2	0.6	0.83	0.82	1.22	0.80	2.15	45KDE13
50	90	49	39.5	1.5	0.6	50KBE02	131000	183000		58.5	85	1.5	0.6	0.42	1.61	2.39	1.57	1.22	50KBE02
	90	55	43.5	1.5	0.6	50KBE22	146000	211000		58.5	85	1.5	0.6	0.42	1.61	2.39	1.57	1.39	50KBE22
	110	64	51.5	2	0.6	50KBE03	236000	305000		62	102	2	0.6	0.35	1.96	2.91	1.91	2.68	50KBE03
	110	64	43.5	2	0.6	50KDE13	198000	266000		62	105	2	0.6	0.83	0.82	1.22	0.80	3.11	50KDE13
55	100	51	41.5	2	0.6	55KBE02	162000	226000		65	94	2	0.6	0.40	1.67	2.48	1.63	1.6	55KBE02
	100	60	48.5	2	0.6	55KBE22	184000	266000		65	95	2	0.6	0.40	1.67	2.48	1.63	1.87	55KBE22
	120	70	57	2	0.6	55KBE03	256000	341000		67	111	2	0.6	0.35	1.96	2.91	1.91	3.57	55KBE03
	120	70	49	2	0.6	55KDE13	221000	297000		67	113	2	0.6	0.83	0.82	1.22	0.80	3.54	55KDE13
60	110	53	43.5	2	0.6	60KBE02	182000	254000		70	103	2	0.6	0.40	1.67	2.48	1.63	2.04	60KBE02
	110	66	54.5	2	0.6	60KBE22	226000	334000		70	104	2	0.6	0.40	1.67	2.48	1.63	2.57	60KBE22
	130	74	59	2.5	1	60KBE03	297000	401000		74	120	2.5	1	0.35	1.96	2.91	1.91	4.46	60KBE03
	130	74	51	2.5	1	60KDE13	262000	359000		74	124	2.5	1	0.83	0.82	1.22	0.8	4.45	60KDE13
65	120	56	46.5	2	0.6	65KBE02	220000	311000		75	113	2	0.6	0.40	1.67	2.48	1.63	2.84	65KBE02
	120	73	61.5	2	0.6	65KBE22	270000	406000		75	115	2	0.6	0.40	1.67	2.48	1.63	3.4	65KBE22
	140	79	63	2.5	1	65KBE03	349000	478000		79	130	2.5	1	0.35	1.96	2.91	1.91	5.51	65KBE03
	140	79	53	2.5	1	65KDE13	302000	417000		79	133	2.5	1	0.83	0.82	1.22	0.80	5.3	65KDE13
70	125	59	48.5	2	0.6	70KBE02	236000	346000		80	118	2	0.6	0.42	1.61	2.39	1.57	2.87	70KBE02
	125	74	61.5	2	0.6	70KBE22	290000	450000		80	119	2	0.6	0.42	1.61	2.39	1.57	3.7	70KBE22
	150	83	67	2.5	1	70KBE03	394000	546000		84	140	2.5	1	0.35	1.96	2.91	1.91	6.65	70KBE03
	150	83	57	2.5	1	70KDE13	338000	470000		84	142	2.5	1	0.83	0.82	1.22	0.8	6.48	70KDE13
75	130	62	51.5	2	0.6	75KBE02	244000	362000		85	124	2	0.6	0.44	1.55	2.31	1.52	3.12	75KBE02
	130	74	61.5	2	0.6	75KBE22	298000	469000		85	125	2	0.6	0.44	1.55	2.31	1.52	3.85	75KBE22
	160	87	69	2.5	1	75KBE03	429000	594000		89	149	2.5	1	0.35	1.96	2.91	1.91	7.8	75KBE03

Double-row Tapered Roller Bearings - Outward

Bore Diameter: 80~120mm



Dynamic equivalent radial load
Pr=XFr+YFa

$\frac{F_a}{F_r} \leq e$		$\frac{F_a}{F_r} > e$	
X	Y	X	Y
1	Y ₁	0.67	Y ₂

Values e, Y₁ and Y₂ from table.

Static equivalent radial load
P0r=Fr+Y0Fa

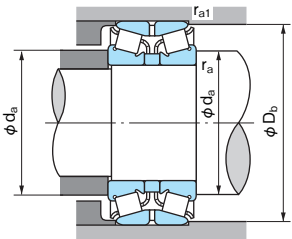
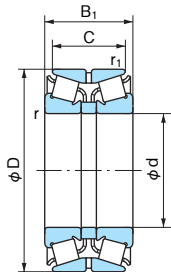
Values Y₀ from table.

1N=0.102kgf

Boundary dimensions (mm)						Bearing No.	Basic dynamic load rating Cr (N)	Basic static load rating Cor (N)		Abutment and fillet dimensions (mm)				Constant e	Axial load factor			Mass (kg)	Bearing No.
d	D	B ₁	C	r (min)	r ₁ (min)					d _a (min)	D _b (min)	r _a (max)	r _{a1} (max)		Y ₁	Y ₂	Y ₀		
80	140	64	51.5	2	0.6	80KBE02	277000	405000		92	132	2	0.6	0.42	1.61	2.39	1.57	3.76	80KBE02
	140	78	63.5	2	0.6	80KBE22	347000	542000		92	134	2	0.6	0.42	1.61	2.39	1.57	4.71	80KBE22
	170	92	73	2.5	1	80KBE03	504000	711000		94	159	2.5	1	0.35	1.96	2.91	1.91	9.44	80KBE03
85	150	70	57	2	0.6	85KBE02	313000	463000		97	141	2	0.6	0.42	1.61	2.39	1.57	4.79	85KBE02
	150	86	69	2	0.6	85KBE22	398000	630000		97	142	2	0.6	0.42	1.61	2.39	1.57	6.05	85KBE22
	180	98	77	3	1	85KBE03	522000	733000		103	167	3	1	0.35	1.96	2.91	1.91	11	85KBE03
90	160	74	61	2	0.6	90KBE02	350000	522000		102	150	2	0.6	0.42	1.61	2.39	1.57	5.85	90KBE02
	160	94	77	2	0.6	90KBE22	451000	724000		102	152	2	0.6	0.42	1.61	2.39	1.57	7.53	90KBE22
	190	102	81	3	1	90KBE03	576000	812000		108	177	3	1	0.35	1.96	2.91	1.91	13	90KBE03
95	170	78	63	2.5	1	95KBE02	396000	598000		109	159	2.5	1	0.42	1.61	2.39	1.57	7.01	95KBE02
	170	100	83	2.5	1	95KBE22	533000	877000		109	161	2.5	1	0.42	1.61	2.39	1.57	9.25	95KBE22
	200	108	85	3	1	95KBE03	543000	736000		113	186	3	1	0.35	1.96	2.91	1.91	14.8	95KBE03
100	180	83	67	2.5	1	100KBE02	443000	676000		114	168	2.5	1	0.42	1.61	2.39	1.57	8.33	100KBE02
	180	107	87	2.5	1	100KBE22	596000	990000		114	171	2.5	1	0.42	1.61	2.39	1.57	11.1	100KBE22
	215	112	87	3	1	100KBE03	589000	798000		118	200	3	1	0.35	1.96	2.91	1.91	18.1	100KBE03
105	190	88	70	2.5	1	105KBE02	494000	761000		119	178	2.5	1	0.42	1.61	2.39	1.57	9.87	105KBE02
	190	115	95	2.5	1	105KBE22	672000	1130000		119	180	2.5	1	0.42	1.61	2.39	1.57	13.5	105KBE22
	225	116	91	3	1	105KBE03	636000	864000		123	209	3	1	0.35	1.96	2.91	1.91	20.7	105KBE03
110	180	70	56	2.5	0.6	110KBE031	324000	533000		122	168	2	0.6	0.35	1.92	2.86	1.88	6.43	110KBE031
	180	56	50	2.5	0.6	110KBE131	245000	388000		122	168	2	0.6	0.35	1.95	2.90	1.91	5.13	110KBE131
	200	92	74	2.5	1	110KBE02	556000	868000		124	188	2.5	1	0.42	1.61	2.39	1.57	11.6	110KBE02
	200	121	101	2.5	1	110KBE22	750000	1280000		124	190	2.5	1	0.42	1.61	2.39	1.57	15.9	110KBE22
120	240	118	93	3	1	110KBE03	824000	1180000		128	222	3	1	0.35	1.96	2.91	1.91	23.8	110KBE03
	180	58	46	2.5	0.6	120KBE030	247000	460000		132	169	2	0.6	0.35	1.95	2.90	1.91	4.66	120KBE030
	180	46	41	2.5	0.6	120KBE130	185000	317000		132	170	2	0.6	0.35	1.95	2.90	1.91	3.81	120KBE130
	200	78	62	2.5	0.6	120KBE031	387000	672000		132	185	2	0.6	0.35	1.95	2.90	1.91	9.14	120KBE031
	200	62	55	2.5	0.6	120KBE131	292000	470000		132	184	2	0.6	0.35	1.95	2.90	1.91	7.28	120KBE131
	215	97	78	2.5	1	120KBE02	595000	945000		134	203	2.5	1	0.44	1.55	2.31	1.52	13.9	120KBE02
	215	132	109	2.5	1	120KBE22	806000	1380000		134	204	2.5	1	0.44	1.55	2.31	1.52	19.8	120KBE22
	260	128	101	3	1	120KBE03	864000	1220000		138	239	3	1	0.35	1.96	2.91	1.91	30.6	120KBE03

Double-row Tapered Roller Bearings - Outward

Bore Diameter: 130~170mm



Dynamic equivalent radial load

$P_r = X F_r + Y F_a$

$\frac{F_a}{F_r} \leq e$		$\frac{F_a}{F_r} > e$	
X	Y	X	Y
1	Y ₁	0.67	Y ₂

Values e, Y₁ and Y₂ from table.

Static equivalent radial load

$P_{0r} = F_r + Y_0 F_a$

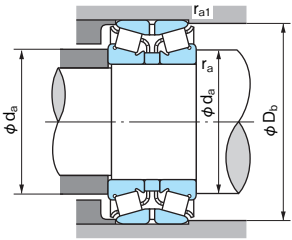
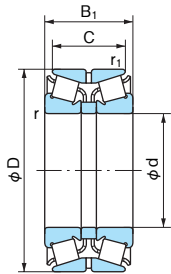
Values Y₀ from table.

1N=0.102kgf

Boundary dimensions (mm)						Bearing No.	Basic dynamic load rating Cr (N)	Basic static load rating Cor (N)		Abutment and fillet dimensions (mm)				Constant e	Axial load factor			Mass (kg)	Bearing No.
d	D	B ₁	C	r (min)	r ₁ (min)					d _a (min)	D _b (min)	r _a (max)	r _{a1} (max)		Y ₁	Y ₂	Y ₀		
130	200	65	52	2.5	0.6	130KBE030	319000	618000		142	185	2	0.6	0.35	1.95	2.90	1.91	7.06	130KBE030
	200	52	46	2.5	0.6	130KBE130	239000	425000		142	187	2	0.6	0.35	1.95	2.90	1.91	5.57	130KBE130
	210	80	64	2.5	0.6	130KBE031	424000	723000		142	198	2	0.6	0.36	1.87	2.79	1.83	9.57	130KBE031
	210	64	57	2.5	0.6	130KBE131	322000	535000		142	196	2	0.6	0.36	1.87	2.79	1.83	7.81	130KBE131
	230	98	78.5	3	1	130KBE02	646000	1020000		148	218	3	1	0.44	1.55	2.31	1.52	15.7	130KBE02
	230	145	117.5	3	1	130KBE22	949000	1660000		148	219	3	1	0.44	1.55	2.31	1.52	24.1	130KBE22
140	280	137	107.5	4	1.5	130KBE03	965000	1370000		152	255	4	1.5	0.35	1.96	2.91	1.91	38.1	130KBE03
	210	66	53	2.5	0.6	140KBE030	360000	639000		152	199	2	0.6	0.47	1.43	2.12	1.40	7.18	140KBE030
	210	53	47	2.5	0.6	140KBE130	239000	404000		152	196	2	0.6	0.33	2.03	3.02	1.98	5.85	140KBE130
	225	85	68	3	1	140KBE031	475000	836000		154	212	2.5	1	0.35	1.95	2.90	1.91	11.8	140KBE031
	225	68	61	3	1	140KBE131	360000	564000		154	210	2.5	1	0.35	1.95	2.90	1.91	9.58	140KBE131
	250	102	82.5	3	1	140KBE02	694000	1080000		158	237	3	1	0.44	1.55	2.31	1.52	19.7	140KBE02
150	250	153	125.5	3	1	140KBE22	1090000	1920000		158	238	3	1	0.44	1.55	2.31	1.52	30.2	140KBE22
	300	145	115.5	4	1.5	140KBE03	1070000	1520000		162	273	4	1.5	0.35	1.96	2.91	1.91	46.6	140KBE03
	225	70	56	3	1	150KBE030	377000	703000		164	213	2.5	1	0.33	2.03	3.02	1.98	8.82	150KBE030
	225	56	50	3	1	150KBE130	278000	476000		164	213	2.5	1	0.33	2.03	3.02	1.98	7.09	150KBE130
	250	100	80	3	1	150KBE031	595000	1070000		164	234	2.5	1	0.35	1.95	2.90	1.91	17.6	150KBE031
	250	80	71	3	1	150KBE131	467000	786000		164	233	2.5	1	0.35	1.95	2.90	1.91	14.6	150KBE131
160	270	109	87	3	1	150KBE02	799000	1250000		168	255	3	1	0.44	1.55	2.31	1.52	24.6	150KBE02
	270	164	130	3	1	150KBE22	1210000	2130000		168	254	3	1	0.44	1.55	2.31	1.52	38	150KBE22
	320	154	120	4	1.5	150KBE03	1230000	1920000		172	292	4	1.5	0.35	1.96	2.91	1.91	56	150KBE03
	240	75	60	3	1	160KBE030	406000	756000		174	226	2.5	1	0.33	2.03	3.02	1.98	10.6	160KBE030
	240	60	53	3	1	160KBE130	324000	565000		174	228	2.5	1	0.33	2.03	3.02	1.98	8.71	160KBE130
	270	108	86	3	1	160KBE031	727000	1270000		174	252	2.5	1	0.35	1.95	2.90	1.91	23.1	160KBE031
170	270	86	76	3	1	160KBE131	592000	950000		174	252	2.5	1	0.35	1.95	2.90	1.91	18.8	160KBE131
	290	115	91	3	1	160KBE02	827000	1270000		178	269	3	1	0.44	1.55	2.31	1.52	29.9	160KBE02
	290	178	144	3	1	160KBE22	1360000	2420000		178	274	3	1	0.44	1.55	2.31	1.52	47.6	160KBE22
	260	84	67	3	1	170KBE030	502000	969000		184	244	2.5	1	0.33	2.03	3.02	1.98	14.7	170KBE030
	260	67	60	3	1	170KBE130	382000	642000		184	243	2.5	1	0.33	2.03	3.02	1.98	11.4	170KBE130
	280	110	88	3	1	170KBE031	776000	1390000		184	260	2.5	1	0.33	2.06	3.06	2.01	24.7	170KBE031
170	280	88	78	3	1	170KBE131	599000	1050000		184	263	2.5	1	0.33	2.06	3.06	2.01	19.8	170KBE131
	310	125	97	4	1.5	170KBE02	932000	1450000		192	288	4	1.5	0.44	1.55	2.31	1.52	37.5	170KBE02
	310	192	152	4	1.5	170KBE22	1540000	2760000		192	294	4	1.5	0.44	1.55	2.31	1.52	58.8	170KBE22

Double-row Tapered Roller Bearings - Outward

Bore Diameter: 180~280mm



Dynamic equivalent radial load

Pr=XFr+YFa

$\frac{Fa}{Fr} \leq e$		$\frac{Fa}{Fr} > e$	
X	Y	X	Y
1	Y ₁	0.67	Y ₂

Values e, Y₁ and Y₂ from table.

Static equivalent radial load

Por=Fr+YoFa

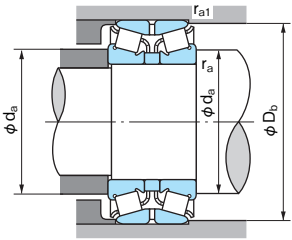
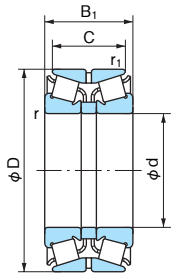
Values Y₀ from table.

1N=0.102kgf

Boundary dimensions (mm)						Bearing No.	Basic dynamic load rating Cr (N)	Basic static load rating Cor (N)		Abutment and fillet dimensions (mm)				Constant e	Axial load factor			Mass (kg)	Bearing No.
d	D	B ₁	C	r (min)	r ₁ (min)					d _a (min)	D _b (min)	r _a (max)	r _{a1} (max)		Y ₁	Y ₂	Y ₀		
180	280	93	74	3	1	180KBE030	584000	1080000		194	261	2.5	1	0.33	2.03	3.02	1.98	19.0	180KBE030
	280	74	66	3	1	180KBE130	464000	801000		194	263	2.5	1	0.33	2.03	3.02	1.98	15.5	180KBE130
	300	120	96	4	1.5	180KBE031	894000	1630000		198	279	3	1.5	0.33	2.06	3.06	2.01	31.3	180KBE031
	300	96	85	4	1.5	180KBE131	693000	1240000		198	277	3	1.5	0.33	2.06	3.06	2.01	25.8	180KBE131
	320	127	99	4	1.5	180KBE02	1060000	1470000		202	297	4	1.5	0.45	1.5	2.23	1.47	40.1	180KBE02
	320	192	152	4	1.5	180KBE22	1640000	3030000		202	303	4	1.5	0.45	1.5	2.23	1.47	62.5	180KBE22
190	290	94	75	3	1	190KBE030	632000	1170000		204	274	2.5	1	0.33	2.03	3.02	1.98	20.0	190KBE030
	290	75	67	3	1	190KBE130	487000	866000		204	272	2.5	1	0.32	2.12	3.15	2.07	16.5	190KBE130
	320	130	104	4	1.5	190KBE031	1020000	1860000		208	298	3	1.5	0.35	1.95	2.90	1.91	39.0	190KBE031
	320	104	92	4	1.5	190KBE131	808000	1450000		208	298	3	1.5	0.35	1.95	2.90	1.91	31.9	190KBE131
	340	133	105	4	1.5	190KBE02	1250000	2060000		212	318	4	1.5	0.44	1.55	2.31	1.52	47.8	190KBE02
	340	204	160	4	1.5	190KBE22	1870000	3480000		212	323	4	1.5	0.44	1.55	2.31	1.52	75.1	190KBE22
200	310	103	82	3	1	200KBE030	713000	1380000		212	295	2.5	1	0.33	2.03	3.02	1.98	24.5	200KBE030
	310	82	73	3	1	200KBE130	572000	1040000		214	288	2.5	1	0.32	2.12	3.15	2.07	21.4	200KBE130
	340	140	112	4	1.5	200KBE031	1110000	2040000		218	319	3	1.5	0.35	1.95	2.90	1.91	48.2	200KBE031
	340	112	100	4	1.5	200KBE131	939000	1580000		218	316	3	1.5	0.35	1.95	2.90	1.91	39.6	200KBE131
	360	142	110	4	1.5	200KBE02	1360000	2240000		222	336	4	1.5	0.44	1.55	2.31	1.52	56.5	200KBE02
	360	218	174	4	1.5	200KBE22	2130000	3760000		222	340	4	1.5	0.41	1.66	2.47	1.62	88.2	200KBE22
220	340	113	90	4	1.5	220KBE030	832000	1620000		238	319	3	1.5	0.32	2.12	3.15	2.07	34.2	220KBE030
	340	90	80	4	1.5	220KBE130	677000	1240000		238	318	3	1.5	0.32	2.12	3.15	2.07	27.8	220KBE130
	370	150	120	5	1.5	220KBE031	1330000	2470000		242	343	4	1.5	0.35	1.95	2.90	1.91	60.1	220KBE031
	370	120	107	5	1.5	220KBE131	1070000	1810000		242	346	4	1.5	0.35	1.95	2.90	1.91	49.1	220KBE131
240	360	115	92	4	1.5	240KBE030	990000	1980000		258	341	3	1.5	0.32	2.12	3.15	2.07	36.9	240KBE030
	360	92	82	4	1.5	240KBE130	768000	1430000		258	338	3	1.5	0.32	2.12	3.15	2.07	29.6	240KBE130
	400	160	128	5	1.5	240KBE031	1540000	3060000		262	373	4	1.5	0.35	1.95	2.90	1.91	76.2	240KBE031
	400	128	114	5	1.5	240KBE131	1190000	2180000		262	377	4	1.5	0.35	1.95	2.90	1.91	59.0	240KBE131
260	400	130	104	5	1.5	260KBE030	1210000	2480000		282	376	4	1.5	0.32	2.12	3.15	2.07	54.8	260KBE030
	400	104	92	5	1.5	260KBE130	935000	1830000		282	373	4	1.5	0.33	2.03	3.02	1.98	44.6	260KBE130
	440	180	144	5	1.5	260KBE031	2010000	3960000		282	409	4	1.5	0.35	1.95	2.90	1.91	105	260KBE031
	440	144	128	5	1.5	260KBE131	1510000	2880000		282	410	4	1.5	0.35	1.95	2.90	1.91	83.8	260KBE131
280	420	133	106	5	1.5	280KBE030	1250000	2610000		302	394	4	1.5	0.33	2.03	3.02	1.98	58.9	280KBE030
	420	106	94	5	1.5	280KBE130	1010000	1970000		302	395	4	1.5	0.33	2.03	3.02	1.98	46.9	280KBE130
	460	183	146	6	2	280KBE031	2040000	3940000		308	434	5	2	0.35	1.95	2.90	1.91	111	280KBE031
	460	146	130	6	2	280KBE131	1550000	2930000		308	430	5	2	0.35	1.95	2.90	1.91	90.0	280KBE131

Double-row Tapered Roller Bearings - Outward

Bore Diameter: 300~460mm



Dynamic equivalent radial load

Pr=XFr+YFa

$\frac{Fa}{Fr} \leq e$		$\frac{Fa}{Fr} > e$	
X	Y	X	Y
1	Y ₁	0.67	Y ₂

Values e, Y₁ and Y₂ from table.

Static equivalent radial load

Por=Fr+YoFa

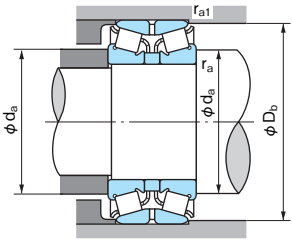
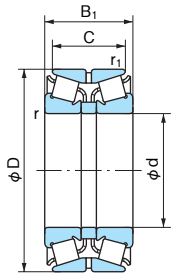
Values Y₀ from table.

1N=0.102kgf

Boundary dimensions (mm)						Bearing No.	Basic dynamic load rating Cr (N)	Basic static load rating Cor (N)		Abutment and fillet dimensions (mm)				Constant e	Axial load factor			Mass (kg)	Bearing No.
d	D	B ₁	C	r (min)	r ₁ (min)					d _a (min)	D _b (min)	r _a (max)	r _{a1} (max)		Y ₁	Y ₂	Y ₀		
300	460	148	118	5	1.5	300KBE030	1630000	3230000		322	433	4	1.5	0.32	2.12	3.15	2.07	80.2	300KBE030
	460	118	105	5	1.5	300KBE130	1290000	2400000		322	436	4	1.5	0.32	2.12	3.15	2.07	64.6	300KBE130
	500	200	160	6	2	300KBE031	2270000	4630000		328	466	5	2	0.35	1.95	2.90	1.91	144	300KBE031
	500	160	142	6	2	300KBE131	1980000	3540000		328	469	5	2	0.35	1.95	2.90	1.91	116	300KBE131
320	480	151	121	5	1.5	320KBE030	1650000	3410000		342	452	4	1.5	0.32	2.12	3.15	2.07	87.7	320KBE030
	480	121	108	5	1.5	320KBE130	1430000	2700000		342	452	4	1.5	0.32	2.12	3.15	2.07	71.6	320KBE130
	540	220	176	6	2	320KBE031	2610000	5390000		348	497	5	2	0.35	1.95	2.90	1.91	190	320KBE031
	540	176	157	6	2	320KBE131	2440000	4570000		348	502	5	2	0.35	1.95	2.90	1.91	154	320KBE131
340	520	165	133	6	2	340KBE030	1930000	4060000		368	491	5	2	0.32	2.12	3.15	2.07	117	340KBE030
	520	133	118	6	2	340KBE130	1550000	3070000		368	489	5	2	0.32	2.12	3.15	2.07	95.3	340KBE130
	580	238	190	6	2	340KBE031	3160000	6340000		368	543	5	2	0.35	1.95	2.90	1.91	244	340KBE031
	580	190	169	6	2	340KBE131	2540000	4620000		368	539	5	2	0.35	1.95	2.90	1.91	198	340KBE131
360	540	169	134	6	2	360KBE030	2020000	4230000		388	512	5	2	0.32	2.12	3.15	2.07	124	360KBE030
	540	134	120	6	2	360KBE130	1660000	3290000		388	510	5	2	0.32	2.12	3.15	2.07	93.0	360KBE130
	600	240	192	6	2	360KBE031	3660000	7230000		388	568	5	2	0.39	1.74	2.59	1.70	254	360KBE031
	600	192	171	6	2	360KBE131	2680000	4880000		388	557	5	2	0.35	1.94	2.90	1.91	206	360KBE131
380	560	171	135	6	2	380KBE030	2240000	4670000		408	531	5	2	0.39	1.74	2.59	1.70	129	380KBE030
	560	135	122	6	2	380KBE130	1740000	3560000		408	530	5	2	0.32	2.12	3.15	2.07	100	380KBE130
	620	243	194	6	2	380KBE031	3490000	7360000		408	578	5	2	0.35	1.95	2.59	1.91	265	380KBE031
	620	194	173	6	2	380KBE131	2870000	5220000		408	582	5	2	0.39	1.74	2.90	1.71	215	380KBE131
400	600	185	148	6	2	400KBE030	2420000	5150000		428	563	5	2	0.32	2.12	3.15	2.07	167	400KBE030
	600	148	132	6	2	400KBE130	1870000	3720000		428	560	5	2	0.32	2.12	3.15	2.07	135	400KBE130
	650	250	200	6	3	400KBE031	4060000	8850000		428	610	5	2.5	0.35	1.95	2.90	1.91	306	400KBE031
	650	200	178	6	3	400KBE131	2980000	5920000		428	605	5	2.5	0.35	1.95	2.90	1.91	243	400KBE131
420	620	188	150	6	2	420KBE030	2700000	5660000		448	589	5	2	0.39	1.74	2.59	1.70	176	420KBE030
	620	150	134	6	2	420KBE130	2010000	4130000		448	590	5	2	0.33	2.03	3.02	1.98	142	420KBE130
	700	280	224	6	3	420KBE031	4810000	9620000		448	659	5	2.5	0.39	1.74	2.59	1.70	400	420KBE031
	700	224	200	6	3	420KBE131	3700000	6880000		448	659	5	2.5	0.39	1.74	2.59	1.70	325	420KBE131
440	650	196	157	6	3	440KBE030	3000000	6370000		468	620	5	2.5	0.39	1.74	2.59	1.70	198	440KBE030
	650	157	140	6	3	440KBE130	2260000	4430000		468	622	5	2.5	0.33	2.03	3.02	1.98	156	440KBE130
	720	283	226	6	3	440KBE031	4940000	10100000		468	679	5	2.5	0.40	1.68	2.51	1.65	418	440KBE031
460	680	204	163	6	3	460KBE030	3220000	6850000		488	646	5	2.5	0.39	1.74	2.59	1.70	232	460KBE030
	680	163	145	6	3	460KBE130	2500000	5340000		488	637	5	2.5	0.37	1.83	2.72	1.78	196	460KBE130
	760	300	240	7.5	4	460KBE031	5680000	11600000		496	718	6	3	0.39	1.74	2.59	1.70	506	460KBE031

Double-row Tapered Roller Bearings - Outward

Bore Diameter: 480~500mm



Dynamic equivalent radial load

$P_r = X F_r + Y F_a$

$\frac{F_a}{F_r} \leq e$		$\frac{F_a}{F_r} > e$	
X	Y	X	Y
1	Y_1	0.67	Y_2

Values e, Y_1 and Y_2 from table.

Static equivalent radial load

$P_0 = F_r + Y_0 F_a$

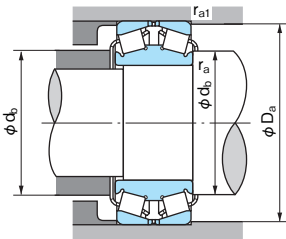
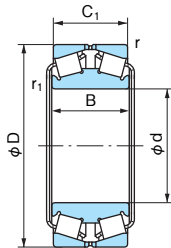
Values Y_0 from table.

1N=0.102kgf

Boundary dimensions (mm)						Bearing No.	Basic dynamic load rating Cr (N)	Basic static load rating Cor (N)		Abutment and fillet dimensions (mm)				Constant e	Axial load factor			Mass (kg)	Bearing No.
d	D	B1	C	r (min)	r1 (min)					da (min)	Db (min)	ra (max)	ra1 (max)		Y1	Y2	Y0		
480	700	206	165	6	3	480KBE030	3220000	7230000		508	672	5	2.5	0.33	2.03	3.02	1.98	240	480KBE030
	700	165	147	6	3	480KBE130	2530000	5300000		508	666	5	2.5	0.33	2.03	3.02	1.98	186	480KBE130
	790	310	248	7.5	4	480KBE031	5990000	12400000		516	749	6	3	0.39	1.74	2.59	1.70	560	480KBE031
	790	248	221	7.5	4	480KBE131	4640000	8920000		516	742	6	3	0.39	1.74	2.59	1.70	457	480KBE131
500	720	209	167	6	3	500KBE030	3500000	7850000		528	690	5	2.5	0.42	1.62	2.41	1.58	258	500KBE030
	720	167	149	6	3	500KBE130	2580000	5690000		528	679	5	2.5	0.40	1.71	2.54	1.67	210	500KBE130
	830	264	235	7.5	4	500KBE131	5220000	10900000		536	776	6	3	0.39	1.74	2.59	1.70	559	500KBE131

Double-row Tapered Roller Bearings - Inward

Bore Diameter: 110~360mm



Dynamic equivalent radial load
 $P_r = X F_r + Y F_a$

$\frac{F_a}{F_r} \leq e$		$\frac{F_a}{F_r} > e$	
X	Y	X	Y
1	Y_1	0.67	Y_2

Values e , Y_1 , and Y_2 from table.

Static equivalent radial load
 $P_{0r} = F_r + Y_0 F_a$

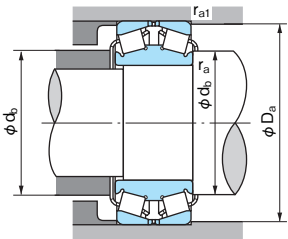
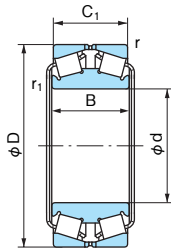
Values Y_0 from table.

1N=0.102kgf

Boundary dimensions (mm)						Bearing No.	Basic dynamic load rating Cr (N)	Basic static load rating Cor (N)	Abutment and fillet dimensions (mm)				Constant e	Axial load factor			Mass (kg)	Bearing No.
d	D	B	C1	r (min)	r1 (min)				db (min)	Da (min)	ra (max)	ra1 (max)		Y1	Y2	Y0		
110	180	56	56	2	2.5	110KBD031	300000	505000	128	160	2	2	0.35	1.95	2.90	1.91	5.40	110KBD031
120	180	46	46	2	2.5	120KBD030	229000	424000	138	163	2	2	0.26	2.55	3.80	2.50	4.08	120KBD030
	200	62	62	2	2.5	120KBD031	353000	598000	142	178	2	2	0.35	1.95	2.90	1.91	7.92	120KBD031
130	200	52	52	2	2.5	130KBD030	300000	548000	152	179	2	2	0.27	2.47	3.67	2.41	5.96	130KBD030
	210	64	64	2	2.5	130KBD031	412000	657000	153	185	2	2	0.36	1.87	2.79	1.83	8.41	130KBD031
140	210	53	53	2	2.5	140KBD030	311000	564000	159	188	2	2	0.27	2.47	3.67	2.41	6.45	140KBD030
	225	68	68	2.5	3	140KBD031	486000	807000	160	210	2	2.5	0.40	1.68	2.50	1.64	10.0	140KBD031
150	225	56	56	2.5	3	150KBD030	355000	686000	174	203	2	2.5	0.26	2.55	3.80	2.50	7.78	150KBD030
	250	80	80	2.5	3	150KBD031	593000	955000	179	220	2	2.5	0.35	1.95	2.90	1.91	15.5	150KBD031
160	240	60	60	2.5	3	160KBD030	421000	705000	184	217	2	2.5	0.24	2.79	4.15	2.73	9.22	160KBD030
	270	86	86	2.5	3	160KBD031	678000	1100000	193	237	2	2.5	0.35	1.95	2.90	1.91	19.8	160KBD031
170	260	67	67	2.5	3	170KBD030	521000	956000	195	233	2	2.5	0.31	2.21	3.29	2.16	12.4	170KBD030
	280	88	88	2.5	3	170KBD031	723000	1210000	201	247	2	2.5	0.33	2.03	3.02	1.98	21.6	170KBD031
180	280	74	74	2.5	3	180KBD030	575000	1050000	208	250	2	2.5	0.28	2.43	3.61	2.37	16.8	180KBD030
	300	96	96	3	4	180KBD031	860000	1370000	210	263	2.5	3	0.35	1.95	2.90	1.91	26.5	180KBD031
190	290	75	75	2.5	3	190KBD030	599000	1130000	219	260	2	2.5	0.26	2.55	3.80	2.50	17.7	190KBD030
	320	104	104	3	4	190KBD031	981000	1590000	224	280	2.5	3	0.35	1.95	2.90	1.91	34.0	190KBD031
200	310	82	82	2.5	3	200KBD030	728000	1410000	234	280	2	2.5	0.26	2.55	3.80	2.50	22.9	200KBD030
	340	112	112	3	4	200KBD031	1080000	1840000	244	300	2.5	3	0.35	1.95	2.90	1.91	41.9	200KBD031
220	340	90	90	3	4	220KBD030	804000	1460000	259	306	2.5	3	0.28	2.43	3.61	2.37	28.5	220KBD030
	370	120	120	4	5	220KBD031	1210000	2060000	263	324	3	4	0.35	1.95	2.90	1.91	50.8	220KBD031
240	360	92	90	3	4	240KBD030	915000	1790000	271	325	2.5	3	0.32	2.12	3.15	2.07	32.2	240KBD030
	400	128	128	4	5	240KBD031	1430000	2470000	286	354	3	4	0.35	1.95	2.90	1.91	65.4	240KBD031
260	400	104	104	4	5	260KBD030	1140000	2120000	302	360	3	4	0.25	2.74	4.08	2.68	48.1	260KBD030
	440	144	144	4	5	260KBD031	1890000	3440000	313	386	3	4	0.35	1.95	2.90	1.91	92.2	260KBD031
280	420	106	106	4	5	280KBD030	1190000	2470000	321	370	3	4	0.25	2.69	4.00	2.63	51.9	280KBD030
300	460	118	118	4	5	300KBD030	1610000	3150000	350	418	3	4	0.25	2.74	4.08	2.68	78.5	300KBD030
	500	160	160	5	6	300KBD031	2120000	4240000	356	440	4	5	0.35	1.95	2.90	1.91	129	300KBD031
320	480	121	121	4	5	320KBD030	1630000	3180000	368	434	3	4	0.26	2.55	3.80	2.50	77.8	320KBD030
	540	176	176	5	6	320KBD031	2690000	5280000	378	474	4	5	0.32	2.12	3.15	2.07	167	320KBD031
340	580	190	190	5	6	340KBD031	3290000	5470000	401	515	4	5	0.32	2.12	3.15	2.07	202	340KBD031
360	540	134	134	5	6	360KBD030	2050000	3910000	408	488	4	5	0.32	2.12	3.15	2.06	101	360KBD030
	600	192	192	5	6	360KBD031	3360000	6750000	419	528	4	5	0.32	2.12	3.15	2.06	228	360KBD031

Double-row Tapered Roller Bearings - Inward

Bore Diameter: 380~500mm



Dynamic equivalent radial load
 $P_r = X F_r + Y F_a$

$\frac{F_a}{F_r} \leq e$		$\frac{F_a}{F_r} > e$	
X	Y	X	Y
1	Y_1	0.67	Y_2

Values e , Y_1 , and Y_2 from table.

Static equivalent radial load

$P_0 = F_r + Y_0 F_a$
Values Y_0 from table.

1N=0.102kgf

Boundary dimensions (mm)						Bearing No.	Basic dynamic load rating Cr (N)	Basic static load rating Cor (N)		Abutment and fillet dimensions (mm)				Constant e	Axial load factor			Mass (kg)	Bearing No.
d	D	B	C1	r (min)	r1 (min)					db (min)	Da (min)	ra (max)	ra1 (max)		Y1	Y2	Y0		
380	560	135	135	5	6	380KBD030	2060000	3790000		428	510	4	5	0.27	2.47	3.67	2.41	112	380KBD030
	620	194	194	5	6	380KBD031	3070000	6360000		445	545	4	5	0.32	2.12	3.15	2.07	234	380KBD031
400	600	148	148	5	6	400KBD030	2410000	4960000		452	545	4	5	0.33	2.03	3.02	1.98	143	400KBD030
	650	200	200	6	6	400KBD031	3850000	7810000		458	580	5	5	0.39	1.74	2.59	1.70	265	400KBD031
420	700	224	224	6	6	420KBD031	4710000	8380000		488	623	5	5	0.39	1.74	2.59	1.70	352	420KBD031
	650	157	157	6	6	440KBD030	2750000	5500000		500	592	5	5	0.28	2.43	3.61	2.37	182	440KBD030
440	720	226	226	6	6	440KBD031	4990000	9130000		506	642	5	5	0.39	1.74	2.59	1.70	367	440KBD031
	680	163	163	6	6	460KBD030	3000000	5660000		510	616	5	5	0.39	1.74	2.59	1.70	197	460KBD030
480	700	165	165	6	6	480KBD030	3060000	6710000		531	625	5	5	0.40	1.68	2.50	1.64	215	480KBD030
	720	167	167	6	6	500KBD030	3430000	7350000		545	645	5	5	0.39	1.74	2.59	1.70	222	500KBD030

Four-row Tapered Roller Bearings

Tolerance / metric series Page 57
/ inch series Page 60



● Design and Features

Four-row Tapered Roller Bearings are used for the roll necks of rolling mills and are designed to provide the maximum load capacity within the limited space while allowing easy inspection and maintenance.

Pin-type cages and hollow rollers are used in some of the larger bore sizes to maximize load capacity.

● Recommended Fit (cylindrical bore)

Metric series ... Table 1 and 2
Inch series Table 3 and 4

● Bearing Clearance

Cylindrical-bore, Four-row Tapered Roller Bearings used for roll neck of rolling mill have a C2 or smaller clearance. If selection of special radial clearance is required for special service conditions, contact NACHI.

Bearing clearance for Four-row Tapered roller bearings is factory-adjusted as a set and the individual parts of a set must be mounted according to the set marks.

Table 1. Four-row Bearing Roll Neck Fits (Metric Series)

Unit: μm

Nominal bearing bore diameter d (mm)		Single plane mean bore diameter deviation Δd_{mp}		Roll neck diameter deviation		Fit clearance		Wear limit of roll neck (Reference)
Over	Incl.	High	Low	High	Low	Min	Max	
80	120	0	-20	-120	-150	100	150	300
120	180	0	-25	-150	-175	125	175	350
180	250	0	-30	-175	-200	145	200	400
250	315	0	-35	-210	-240	175	240	480
315	400	0	-40	-240	-300	200	300	600
400	500	0	-45	-245	-300	200	300	600
500	630	0	-50	-250	-300	200	300	600

Table 2. Four-row Bearing Chock Fits (Metric Series)

Unit: μm

Nominal bearing outside diameter D (mm)		Single plane mean outside diameter deviation ΔD_{mp}		Chock inside diameter deviation		Fit clearance		Wear limit of chock inside diameter (Reference)
Over	Incl.	High	Low	High	Low	Min	Max	
120	150	0	-20	+ 60	+25	25	80	160
150	180	0	-25	+125	+50	50	150	300
180	250	0	-30	+120	+50	50	150	300
250	315	0	-35	+115	+50	50	150	300
315	400	0	-40	+110	+50	50	150	300
400	500	0	-45	+105	+50	50	150	300
500	630	0	-50	+100	+50	50	150	300
630	800	0	-75	+150	+75	75	225	450

Table 3. Four-row Bearing Roll Neck Fits (Inch Series)

Unit: μm

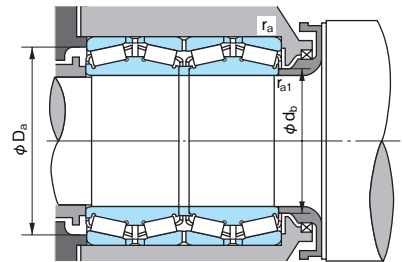
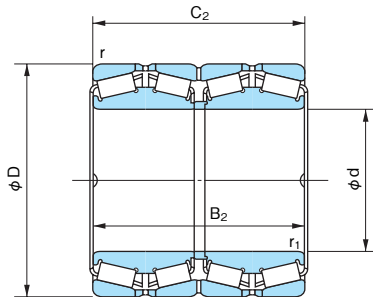
Nominal bearing bore diameter d (mm)				Single plane mean bore diameter deviation Δd_s		Roll neck diameter deviation		Fit clearance		Wear limit of roll neck (Reference)
Over		Incl.		High	Low	High	Low	Min	Max	
(mm)	(inch)	(mm)	(inch)							
127.000	5.0000	152.400	6.0000	+25	0	-120	-150	120	175	300
152.400	6.0000	203.200	8.0000	+25	0	-150	-175	150	200	400
203.200	8.0000	304.800	12.0000	+25	0	-175	-200	175	225	450
304.800	12.0000	609.600	24.0000	+51	0	-200	-250	200	301	600
609.600	24.0000	914.400	36.0000	+76	0	-250	-325	250	401	800

Table 4. Four-row Bearing Chock Fits (Inch Series)

Unit: μm

Nominal bearing outside diameter D (mm)				Single plane mean outside diameter deviation ΔD_s		Chock inside diameter deviation		Fit clearance		Wear limit of chock inside diameter (Reference)
Over		Incl.								
(mm)	(inch)	(mm)	(inch)	High	Low	High	Low	Min	Max	
—	—	304.800	12.0000	+25	0	+ 75	+ 50	25	75	300
304.800	12.0000	609.600	24.0000	+51	0	+150	+100	49	150	300
609.600	24.0000	914.400	36.0000	+76	0	+225	+150	74	225	450

Four-row Tapered Roller Bearings
Metric Series
Bore Diameter: 100~500mm



Dynamic equivalent radial load
 $P_r = X F_r + Y F_a$

$\frac{F_a}{F_r} \leq e$		$\frac{F_a}{F_r} > e$	
X	Y	X	Y
1	Y ₁	0.67	Y ₂

Values of Y₁, Y₂ and e from table.

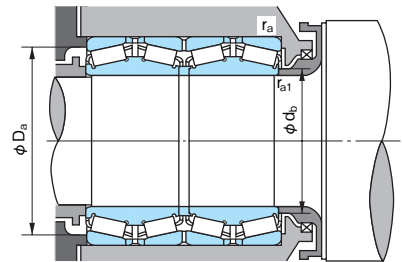
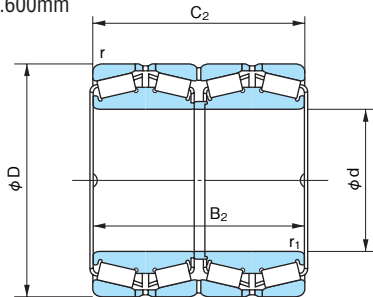
Static equivalent radial load
 $P_{0r} = F_r + Y_0 F_a$
Values Y₀ from table.

1N=0.102kgf

Boundary dimensions (mm)								Bearing No.	Basic dynamic load rating Cr (N)	Basic static load rating Cor (N)		r (min)	r ₁ (min)	Abutment and fillet dimensions (mm)				Constant e	Axial load factor			Mass (kg) Reference	Bearing No.
d (mm)	d (inch)	D (mm)	D (inch)	B ₂ (mm)	B ₂ (inch)	C ₂ (mm)	C ₂ (inch)							d _b	D _a	r _a (max)	r _{a1} (max)		Y ₁	Y ₂	Y ₀		
100	3.9370	140	5.5118	104	4.0945	104	4.0945	100KBV039	300000	725000		2	2	108	130	2	2	0.32	2.12	3.15	2.07	5.0	100KBV039
110	4.3307	155	6.1023	114	4.4882	114	4.4882	110KBV039	365000	790000		2.5	2.5	120	145	2	2	0.40	1.68	2.50	1.64	6.4	110KBV039
120	4.7244	170	6.6929	124	4.8819	124	4.8819	120KBV039	435000	910000		2.5	2.5	130	160	2	2	0.32	2.12	3.15	2.07	8.5	120KBV039
130	5.1181	184	7.2441	134	5.2756	134	5.2756	130KBV039	555000	1330000		2.5	2.5	140	174	2	2	0.32	2.12	3.15	2.07	12.3	130KBV039
140	5.5118	198	7.7952	144	5.6693	144	5.6693	140KBV039	580000	1330000		2.5	2.5	153	184	2	2	0.29	2.32	3.45	2.26	13.3	140KBV039
150	5.9055	212	8.3465	155	6.1024	155	6.1024	150KBV039	680000	1550000		2.5	2.5	161	200	2	2	0.40	1.68	2.50	1.64	15.0	150KBV039
160	6.2992	226	8.8976	165	6.4961	165	6.4961	160KBV039	725000	1950000		2.5	2.5	173	208	2	2	0.35	1.95	2.90	1.91	20.2	160KBV039
170	6.6929	240	9.4488	175	6.8898	175	6.8898	170KBV039	915000	2220000		2.5	2.5	183	225	2	2	0.32	2.12	3.15	2.07	23.7	170KBV039
180	7.0866	254	10.0000	185	7.2835	185	7.2835	180KBV039	980000	2410000		2.5	2.5	193	235	2	2	0.40	1.68	2.50	1.64	28.0	180KBV039
190	7.4803	268	10.5512	196	7.7165	196	7.7165	190KBV039	1030000	2760000		2.5	2.5	204	245	2	2	0.47	1.43	2.12	1.40	33.0	190KBV039
200	7.8740	282	11.1024	206	8.1102	206	8.1102	200KBV039	1290000	3400000		2.5	2.5	215	263	2	2	0.40	1.68	2.50	1.64	49.2	200KBV039
220	8.6614	310	12.2047	226	8.8976	226	8.8976	220KBV039	1500000	4000000		3	3	234	296	2.5	2.5	0.35	1.95	2.90	1.91	52.7	220KBV039
240	9.4488	338	13.3071	248	9.7638	248	9.7638	240KBV039	1740000	4450000		3	3	260	310	2.5	2.5	0.29	2.32	3.45	2.26	68.3	240KBV039
260	10.2362	368	14.4882	268	10.5512	268	10.5512	260KBV039	2010000	5750000		4	4	282	348	3	3	0.33	2.03	3.02	1.98	90.0	260KBV039
280	11.0236	395	15.5512	288	11.3386	288	11.3386	280KBV039	2540000	7050000		4	4	300	374	3	3	0.33	2.03	3.02	1.98	108	280KBV039
300	11.8110	424	16.6929	310	12.2047	310	12.2047	300KBV039	2600000	6800000		4	4	320	394	3	3	0.35	1.95	2.90	1.91	137	300KBV039
320	12.5984	460	18.1102	338	13.3071	338	13.3071	320KBV039	3100000	8800000		4	4	340	428	3	3	0.35	1.95	2.90	1.91	183	320KBV039
340	13.3858	480	18.8976	350	13.7795	350	13.7795	340KBV039	3400000	10100000		5	5	362	458	4	4	0.29	2.32	3.45	2.26	198	340KBV039
360	14.1732	508	20.0000	370	14.5669	370	14.5669	360KBV039	4050000	11900000		5	5	382	486	4	4	0.40	1.68	2.50	1.64	233	360KBV039
380	14.9606	536	21.1024	390	15.3543	390	15.3543	380KBV039	4450000	13600000		5	5	408	500	4	4	0.40	1.68	2.50	1.64	271	380KBV039
400	15.7480	564	22.2047	412	16.2205	412	16.2205	400KBV039	4700000	14000000		5	5	422	542	4	4	0.36	1.87	2.79	1.83	317	400KBV039
420	16.5354	592	23.3071	432	17.0079	432	17.0079	420KBV039	4900000	14000000		5	5	450	556	4	4	0.36	1.87	2.79	1.83	366	420KBV039
440	17.3228	620	24.4094	454	17.8740	454	17.8740	440KBV039	6500000	19900000		6	6	474	574	5	5	0.33	2.03	3.02	1.98	422	440KBV039
460	18.1102	650	25.5906	474	18.6614	474	18.6614	460KBV039	6800000	19600000		6	6	488	622	5	5	0.33	2.03	3.02	1.98	487	460KBV039
480	18.8976	678	26.6929	494	19.4488	494	19.4488	480KBV039	7350000	22900000		6	6	515	637	5	5	0.33	2.02	3.01	1.97	552	480KBV039
500	19.6850	705	27.7559	515	20.2756	515	20.2756	500KBV039	7650000	24000000		6	6	528	677	5	5	0.33	2.03	3.02	1.98	650	500KBV039

Remarks: 1. Regarding four-row tapered roller bearings except above-listed, please contact NACHI.
2. When using four-row tapered roller bearings, please contact NACHI.

Four-row Tapered Roller Bearings
Inch Series
Bore Diameter: 136.525~609.600mm



Dynamic equivalent radial load
 $P_r = X F_r + Y F_a$

$\frac{F_a}{F_r} \leq e$		$\frac{F_a}{F_r} > e$	
X	Y	X	Y
1	Y_1	0.67	Y_2

Values of Y_1 , Y_2 and e from table.

Static equivalent radial load
 $P_{0r} = F_r + Y_0 F_a$

Values Y_0 from table.

1N=0.102kgf

Boundary dimensions (mm)								Bearing No.	Basic dynamic load rating Cr (N)	Basic static load rating Cor (N)		r (min)	r1 (min)	Abutment and fillet dimensions (mm)				Constant e	Axial load factor			Mass (kg) Reference	Reference Bearing No.	Bearing No.
d (mm)	d (inch)	D (mm)	D (inch)	B2 (mm)	B2 (inch)	C2 (mm)	C2 (inch)							db	Da	ra (max)	ra1 (max)		Y1	Y2	Y0			
136.525	5.3750	190.500	7.5000	161.925	6.3750	161.925	6.3750	B26417	715000	1900000		3.3	1.6	147	183	1.5	3.2	0.32	2.10	3.13	2.06	14.9	48393D/48320/48320D	B26417
139.700	5.5000	200.025	7.8750	157.165	6.1876	160.340	6.3126	B28906	720000	2020000		3.3	0.8	147	182	0.8	3.2	0.34	2.01	2.99	1.97	17.7	48680D/48620/48620D	B28906
152.400	6.0000	222.250	8.7500	174.625	6.8750	174.625	6.8750	C21017	910000	2070000		1.6	1.6	164	210	1.5	1.5	0.33	2.02	3.01	1.98	22.7	M231649D/M231610/M231610D	C21017
165.100	6.5000	225.425	8.8750	168.275	6.6250	168.275	6.6250	B25971	755000	2270000		3.2	0.8	175	207	0.8	3.2	0.38	1.76	2.63	1.72	20.2	46791D/46720/46721D	B25971
177.800	7.0000	247.650	9.7500	192.088	7.5625	192.088	7.5625	C20498	990000	2720000		3.3	1.5	190	229	1.5	3.2	0.44	1.54	2.29	1.50	29.0	67791D/67720/67721D	C20498
190.500	7.5000	266.700	10.5000	187.325	7.3750	188.912	7.4375	C19114	1030000	2900000		3.3	1.5	204	246	1.5	3.2	0.47	1.43	2.12	1.40	37.7	67885D/67820/67820D	C19114
244.475	9.6250	327.025	12.8750	193.675	7.6250	193.675	7.6250	C27913	1370000	3550000		3.3	1.5	258	309	1.5	3.2	0.32	2.10	3.13	2.06	43.0	LM247748D/LM247710/LM247710D	C27913
254.000	10.0000	358.775	14.1250	269.875	10.6250	269.875	10.6250	C27916	2120000	5800000		3.4	1.6	275	335	1.5	3.2	0.33	2.02	3.01	1.98	85.5	M249748D/M249710/M249710D	C27916
260.350	10.2500	422.275	16.6250	314.325	12.3750	317.500	12.5000	C22144	2980000	7150000		3.3	6.4	297	404	6.4	3.2	0.33	2.03	3.02	1.98	178	HM252348D/HM252310/HM252310D	C22144
266.700	10.5000	355.600	14.0000	230.188	9.0625	228.600	9.0000	C19619	1490000	4700000		3.2	1.6	277	337	1.5	3.2	0.37	1.80	2.69	1.76	65.6	76590D/76520/76520D	C19619
266.700	10.5000	355.600	14.0000	230.188	9.0625	228.600	9.0000	C29167	1790000	5200000		3.3	1.5	280	335	1.5	3.2	0.31	2.15	3.20	2.10	64.4	LM451349D/LM451310/LM451310D	C29167
279.400	11.0000	393.700	15.5000	269.875	10.6250	269.875	10.6250	C19116	1920000	5300000		6.4	1.5	297	357	1.5	6.4	0.40	1.68	2.50	1.64	103	EE135111D/135155/135156XD	C19116
285.750	11.2500	380.898	14.9960	244.475	9.6250	244.475	9.6250	C27768	1870000	6300000		3.3	1.5	296	362	1.5	3.2	0.43	1.57	2.34	1.53	84.3	LM654648D/LM654610/LM654610D	C27768
304.800	12.0000	419.100	16.5000	269.875	10.6250	269.875	10.6250	C24618	2460000	7050000		6.4	1.5	320	383	1.5	6.4	0.33	2.03	3.02	1.98	110	M257149D/M257110/M257110D	C24618
333.375	13.1250	469.900	18.5000	342.900	13.5000	342.900	13.5000	C21093	3450000	9900000		3.2	3.2	352	451	3.2	3.2	0.33	2.02	3.01	1.97	193	HM261049D/HM261010/HM261010D	C21093
343.052	13.5060	457.098	17.9960	254.000	10.0000	254.000	10.0000	C29794	2480000	7150000		3.3	1.5	356	428	1.5	3.2	0.45	1.49	2.21	1.45	113	LM761649D/LM761610/LM761610D	C29794
346.075	13.6250	488.950	19.2500	358.775	14.1250	358.775	14.1250	C21179	3950000	11600000		3.3	3.3	365	452	3.2	3.2	0.34	2.01	2.99	1.97	208	HM262749D/HM262710/HM262710D	C21179
384.175	15.1250	546.100	21.5000	400.050	15.7500	400.050	15.7500	E17237	5750000	16600000		6.4	3.3	414	507	3.2	6.4	0.33	2.02	3.01	1.98	308	HM266449D/HM266410/HM266410D	E17237
406.400	16.0000	546.100	21.5000	288.925	11.3750	288.925	11.3750	E21147	3050000	8500000		6.4	1.5	427	510	1.5	6.4	0.48	1.42	2.11	1.38	186	LM767749D/LM767710/LM767710D	E21147
431.800	17.0000	571.500	22.5000	279.400	11.0000	279.400	11.0000	E12751	2990000	9550000		3.3	1.5	452	540	1.5	3.2	0.39	1.75	2.60	1.71	191	LM869449D/LM869410/LM869410D	E12751
447.675	17.6250	635.000	25.0000	463.550	18.2500	463.550	18.2500	E17442	6700000	20500000		6.4	3.3	466	599	3.2	6.4	0.33	2.03	3.02	1.98	491	M270749D/M270710/M270710D	E17442
457.200	18.0000	596.900	23.5000	276.225	10.8750	279.400	11.0000	E22321	2950000	9900000		3.3	1.5	478	567	1.5	3.2	0.47	1.43	2.12	1.39	200	L770847D/L770810/L770810D	E22321
479.425	18.8750	679.450	26.7500	495.300	19.5000	495.300	19.5000	E17717	6450000	18900000		6.4	3.2	510	633	3.2	6.4	0.33	2.02	3.01	1.97	590	M272749D/M272710/M272710XD	E17717
482.600	19.0000	615.950	24.2500	330.200	13.0000	330.200	13.0000	E24206	3600000	11900000		6.4	3.4	501	579	3.2	6.4	0.33	2.03	3.02	1.98	251	LM272249D/LM272210/LM272210D	E24206
482.600	19.0000	647.700	25.5000	417.512	16.4375	417.512	16.4375	E12372	5950000	14800000		6.4	3.3	505	611	3.2	6.4	0.33	2.03	3.02	1.98	432	M272647D/M272610/M272610D	E12372
488.950	19.2500	660.400	26.0000	365.125	14.3750	361.950	14.2500	E12371	5250000	19900000		6.4	8.0	525	624	7.8	6.4	0.31	2.20	3.27	2.15	347	EE640193D/640260/640261D	E12371
571.500	22.5000	812.800	32.0000	593.725	23.3750	593.725	23.3750	E23120	10300000	34000000		6.4	3.3	608	776	3.2	6.4	0.33	2.02	3.01	1.98	1020	M278749D/M278710/M278710D	E23120
609.600	24.0000	787.400	31.0000	361.950	14.2500	361.950	14.2500	E11996	4800000	17300000		6.4	3.3	637	747	3.2	6.4	0.37	1.82	2.70	1.78	460	EE649241D/649310/649311D	E11996

Remarks: 1. Regarding four-row tapered roller bearings except above-listed, please contact NACHI.
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